

*Characteristics of*  
**sylvania  
receiving  
tubes**

**SYLVANIA**

SYLVANIA ELECTRIC PRODUCTS INC.  
1740 BROADWAY, NEW YORK 19, N. Y.



A TECHNICAL PUBLICATION OF

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# SYLVANIA RADIO AND TELEVISION TUBE CHARACTERISTICS CHART

## HOW TO USE THIS CHART

The types are listed in numerical and alphabetical order. The second column now lists the Bulb size or style of construction, whichever is most helpful in describing the type. Lock-in, Minature and GT are, of course, well known, but the letters "T" and "ST" may need explaining. "T" means tubular bulb and "ST" is the dome topped bulb as now used in Type 6D6, 24, etc. The following number gives the nominal maximum diameter in eighths of inches. Subminiature types are marked T3, T2 or T1 depending on the bulb diameter.

Note that the 9 pin "minature" is described as T6 $\frac{1}{2}$  in order to distinguish it from the T5 $\frac{1}{2}$ , the original "minature."

Columns are included to show the type of emitter, (cathode or filament), and for interelectrode capacitances on those types having capacitance ratings. On converters the capacitances shown are respectively, Signal Grid to Plate; R-F Input; and Mixer Output. The capacitance values shown are for a shielded tube when the data are available, since this is the latest standard method. Except in the case of obsolete (or newly announced) types, more complete technical data may be found in the SYLVANIA Technical Manual.

The "Basing Diagram" column indicates the internal and external shield connections. For example, this column now shows the basing for Type 7A7 to be 8V-L-5. This means that the active elements are connected as shown in the base diagram 8V, and that the external shielding (in this case the Lock-In base) is connected to the lug (L) and the internal shield to pin 5. This avoids having a separate base diagram for types with a minor difference in shielding. The figures 0-0 indicate no external and no internal shielding respectively.

## NOTICE

This chart contains the very latest radio and television tubes in addition to many out-of-date types. It is designed to be of maximum use to servicemen as a quick reference chart.

Please note that all types listed are not available from Sylvania. They are included for your reference in finding substitutes, etc. Consult our price list for types currently available.

The data published here have been compiled from various sources and while believed to be accurate, no responsibility can be assumed in case of error.

Mention or reference to patented circuits does not constitute permission for their use. The license agreement under which Sylvania tubes are sold is enclosed in the tube carton.

# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter		Note (1) (2) Capacitances in $\mu\text{uf}$ .					Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transcon- ductance Micromhos	Ampli- fication Factor	Ohms Load for Rated Power Output	Undis- torted Power Output Milli- watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout													
00A	ST-14	Triode	4D-0-0	Filament	5.0	0.25	8.5	3.2	2.0	Detector	45	0	1.5	30,000	666	90	30,000	666	20			00A
0A2	Miniature	Diode	5B0-0-0	Cold K	5.0	0.25	8.5	3.2	2.0	Voltage Regulator with starting Voltage at 155, Operating Voltage 150, Operating Current 5 to 30 Ma.	45	0	1.5	30,000	666	90	30,000	666	20			0A2
0A3/VR75	ST-12	Diode	4AJ-0-0	Cold K	5.0	0.25	8.5	3.2	2.0	Voltage Regulator with starting Voltage at 100, Operating Voltage 75, Operating Current 5 to 40 Ma.	45	0	1.5	30,000	666	90	30,000	666	20			0A3/VR75
0A4G	ST-12	Gas Triode	4V-0-0	Cold K	5.0	0.25	8.5	3.2	2.0	Relay Tube Peak Cathode Ma. = 100 D-C Cathode Ma. = 25 Max. Starter Anode Drop = 60V. Approx. Anode Drop = 70V. Approx Trigger Grid Voltage = +90 Volts. Trigger Pulse Voltage = 85 Volts. Keep Alive Current = 50 $\mu\text{a}$ .	45	0	1.5	30,000	666	90	30,000	666	20			0A4G
0A5	T-5½	Gas Pentode	0A5	Cold K	5.0	0.25	8.5	3.2	2.0	Switching	750											0A5
0B2	Miniature	Diode	5B0-0-0	Cold K	5.0	0.25	8.5	3.2	2.0	Voltage Regulator with starting Voltage at 115, Operating Voltage 105, Operating Current 5 to 30 Ma.	45	0	1.5	30,000	666	90	30,000	666	20			0B2
0B3	ST-12	Diode	4AJ-0-0	Cold K	5.0	0.25	8.5	3.2	2.0	Voltage Regulator with starting Voltage at 125, Operating Volts 90, Operating Current 10 Ma. Min. 30 Ma. Max.	45	0	1.5	30,000	666	90	30,000	666	20			0B3
0C3	ST-12	Diode	4AJ-0-0	Cold K	5.0	0.25	8.5	3.2	2.0	Voltage Regulator with starting Voltage at 135, Operating Volts 105, Operating Current 5 Ma. Min. 40 Ma. Max.	45	0	1.5	30,000	666	90	30,000	666	20			0C3
0D3	ST-12	Diode	4AJ-0-0	Cold K	5.0	0.25	8.5	3.2	2.0	Voltage Regulator with starting Voltage at 180, Operating Volts 150, Operating Current 5 Ma. Min. 40 Ma. Max.	45	0	1.5	30,000	666	90	30,000	666	20			0D3
0Y4	Metal	Gas Diode	4BU-1-0	Cathode	5.0	0.25	8.5	3.2	2.0	H-W Rect. 117 A.C. Volts Per Plate, RMS, 75 Ma. Max., 40 Ma. Min. Output Current.	45	0	1.5	30,000	666	90	30,000	666	20			0Y4
0Y4G	T-7	Gas Diode	4BU-0-0	Cathode	5.0	0.25	8.5	3.2	2.0	Starter Anode Connects to Anode thru 10 Megohms By-Passed with .002 $\mu\text{uf}$ .	45	0	1.5	30,000	666	90	30,000	666	20			0Y4G
0Z4	Metal	Gas Duodi.	4R-1-0	Cathode	5.0	0.25	8.5	3.2	2.0	F-W Rect. 300 A.C. Volts Per Plate, RMS, 90 Ma. Max. 30 Ma. Min. Output Current.	45	0	1.5	30,000	666	90	30,000	666	20			0Z4
0Z4A	Metal	Gas Duodi.	4R-1-0	Cathode	5.0	0.25	8.5	3.2	2.0	F-W Rect. 300 A.C. Volts Per Plate, R.M.S., 110 Ma. Max., 30 Ma. Min. Output Current.	45	0	1.5	30,000	666	90	30,000	666	20			0Z4A
0Z4G	T-7	Gas Duodi.	4R-0-0	Cathode	5.0	0.25	8.5	3.2	2.0	F-W Rect. 300 A.C. Volts Per Plate, RMS, 90 Ma. Max. 30 Ma. Min. Output Current.	45	0	1.5	30,000	666	90	30,000	666	20			0Z4G
01A	ST-14	Triode	4D-0-0	Filament	5.0	0.25	8.1	3.1	2.2	Amplifier	135	4.5	2.5	11,000	795	8.0	11,000	795	8.0			01A
1A3	Miniature	Diode	5AP-0-5	Cathode	1.4	0.15				Detector	135	3.0	2.2	1 Meg.	625		1 Meg.	625				1A3
1A4P	ST-12	Pentode	4M-0-4	Filament	2.0	0.06	.007m	5.0	11.0	R-F Amp.	180	3.0	2.3	1 Meg.	725		1 Meg.	725				1A4P
1A4T	ST-12	Tetode	4K-0-3	Filament	2.0	0.06	.010m	5.0	11.0	R-F Amp.	180	3.0	2.3	350,000	625		600,000	650				1A4T
1A5GT	GT	Pentode	6X-0-0	Filament	1.4	0.05				Power Amp.	85	4.5	3.5	300,000	800		300,000	850		95,000	100	1A5GT
1A6	ST-12	Heptode	6L-0-0	Filament	2.0	0.06	0.25	10.5	9.0	Converter	135	3.0	1.8	400,000	275A		500,000	300A		(Ga = 135V, □ Max. 2.0 Ma.) (Ga = 180V, □ Max. 2.5 Ma.)	115	1A6
1A7GT	GT	Heptode	7Z-1-0	Filament	1.4	0.05	0.5m	7.0	10.0	Converter	90	0.0	0.55	600,000	950A		600,000	950A		(Ga = 90V, Max. 1.2 Ma.)		1A7GT
1A85	Lock-in	Pentode	5BF-L-0	Filament	1.2	0.13	0.25m	2.80	4.2	R-F Amp.	90	0	3.5	275,000	1,100		120,000	1,350				1A85
1AC5	T-3	Pentode	8CP-0-0	Filament	1.25	.040				Power Amp.	30	2.0	0.5	200,000	450		200,000	450		50,000	15	1AC5
1AD5	T-3	Pentode	8CP-0-0	Filament	1.25	.040	.009	1.9	3.0	R-F Amp.	45	0	0.9	700,000	580		700,000	580		25,000	50	1AD5
1AE4	Miniature	Pentode	6AR-0-0	Filament	1.25	0.1	.008m	3.6	4.4	R-F Amp.	90	0	3.5	500,000	1,550		500,000	1,550				1AE4
1AF4	Miniature	Pentode	6AR-0-1&5	Filament	1.4	0.025	.008m	3.8	7.6	R-F Amp.	67.5	0	67.5	2 Meg.	825		2 Meg.	825				1AF4
1AF5	Miniature	Diode Pent.	6AU-0-0	Filament	1.4	0.025	0.2	2.5	4.3	Det. Amp.	67.5	0	67.5	1.65	950		9.3 Meg.	500				1AF5
1AX2	T-6½	Diode	9Y	Filament	1.4	0.65				H-W Rect.	90	0	1.1	2.0 Meg.	600		2.0 Meg.	600				1AX2
1B3GT	GT	Pentode	3C-0-7	Filament	1.25	0.20			1.5*	Telev. Rect.	135	3.0	1.6	1.5 Meg.	560		1.5 Meg.	560				1B3GT
1B4P	ST-12	Pentode	4M-0-4	Filament	2.0	0.06	.007m	5.0*	11.0*	R-F Amp.	180	3.0	1.7	35,000	575		35,000	575				1B4P
1B5	ST-12	Diode	6M-0-5	Filament	2.0	0.06	3.6	1.6	1.9	Det. Amp.	135	3.0	0.8	350,000	350A		350,000	350A		20		1B5
1B7GT	GT	Heptode	7Z-1-0	Filament	1.4	0.10	0.34	7.0	7.5	Converter	90	0.0	1.5	240,000	975		240,000	975		(Ga = 90V, 1.6 Ma.)		1B7GT
1B8GT	GT	Diode Triode Pentode	8AJ-0-7	Filament	1.4	0.10				Det. Amp. Power Amp.	90	0	0.15	240,000	1,150		240,000	1,150		14,000	210	1B8GT
1C3	Miniature	Triode	5CF-0-0	Filament	1.4	0.05	1.8	0.9	4.2	Amplifier	90	0	4.5	11,200	1,300		11,200	1,300		14.5		1C3
1C5GT	GT	Pentode	6X-0-0	Filament	1.4	0.10				Power Amp.	90	3.0	1.4	19,000	760		19,000	760		14.5		1C5GT
1C6	ST-12	Heptode	6L-0-0	Filament	2.0	0.12	0.3	10.0	10.0	Converter	135	3.0	1.3	110,000	1,500		110,000	1,500		165	9,000	1C6
1C7G	ST-12	Heptode	7Z-0-0	Filament	2.0	0.12	0.26	10.0	14.0	Converter	180	3.0	1.3	600,000	300A		600,000	300A		(Ga = 135V, □ Max. 3.1 Ma.) (Ga = 180V, □ Max. 4.0 Ma.)	240	1C7G
1C8	T-3	Heptode	8CN-0-0	Filament	1.25	0.04	0.25m	6.5	4.0	Converter	30	0.0	0.32	300,000	100A		300,000	100A				1C8
1D3	T-3	Triode	8DN-0-0	Filament	1.25	0.30	2.6*	5.0*	12.0*	Amplifier	90	5.0	12.5	1 Meg.	625		1 Meg.	625		8.7		1D3
1D5GP	ST-12	Pentode	5Y-0-7	Filament	2.0	0.06	.007m	5.0	12.0*	R-F Amp.	135	3.0	2.2	350,000	725		350,000	725				1D5GP
1D5GT	ST-12	Tetode	5R-0-4	Filament	2.0	0.06	.010m	4.4	10.8	R-F Amp.	135	3.0	2.2	600,000	650		600,000	650				1D5GT
1D7G	ST-12	Heptode	7Z-0-0	Filament	2.0	0.06	0.25	10.5	9.0	Converter	135	3.0	1.8	400,000	975A		400,000	975A		(Ga = 135V, □ Max. 2.0 Ma.) (Ga = 180V, □ Max. 2.5 Ma.)	240	1D7G
1D8GT	GT	Diode Triode Pentode	8AJ-0-2	Filament	1.4	.100				Det. Amp.	45	0	0.3	77,000	325		77,000	325		25		1D8GT
										Power Amp.	90	0	1.1	300,000	575		300,000	575		25	20,000	35
											90	4.5	1.6	200,000	925		200,000	925		25	16,000	100
											90	9.0	5.0	200,000	925		200,000	925		25	12,000	200

# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction		Emitter			Note (1) (2) Capacitances in $\mu\text{f.}$			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.												
1E4G	GT	Triode	5S-0-0	Filament	1.4	0.05	2.4	2.4	6.0	Amplifier	90	0.0	.....	4.5	.....	11,000	1,395	14.5	.....	1E4G
1E5GP	ST-12	Pentode	5Y-0-7	Filament	2.0	0.06	.007m	5.5	12.0	R-F Amp.	135	3.0	67.5	1.6	0.7	1.5 Meg. $\downarrow$	560	14	.....	1E5GP
1E7G	ST-12	Duo. Pentode	8C-0-0	Filament	2.0	0.24	.....	.....	.....	Power Amp.	135	7.5	135	7.0 $\downarrow$	2.0 $\downarrow$	220,000	1,600	350	24,000†	1E7G
1E8	T-3	Heptode	8CN-0-0	Filament	1.25	.040	0.4	6.0	5.0	Converter	30	0	30	0.30	0.8	300,000	115 $\Delta$	.....	.....	1E8
1F4	ST-12	Pentode	5K-0-0	Filament	2.0	0.12	.....	.....	.....	Power Amp.	135	4.5	135	8.0	2.4	300,000	1,700	.....	.....	1F4
1F5G	ST-12	Pentode	6X-0-0	Filament	2.0	0.12	.....	.....	.....	Power Amp.	135	4.5	135	8.0	2.4	300,000	1,700	.....	.....	1F5G
1F6	ST-12	Duodi. Pent.	6W-0-6	Filament	2.0	0.06	.007m	4.0	9.0	R-F or I-F A-F Amp.	180	1.5	67.5	2.2	0.7	1 Meg.	650	.....	.....	1F6
1F7G	ST-12	Duodi. Pent.	7AD-0-7	Filament	2.0	0.06	.01m	3.8*	9.5*	R-F or I-F A-F Amp.	180	1.5	67.5	2.2	0.7	1 Meg.	650	.....	.....	1F7G
1F7GV	ST-12	Duodi. Pent.	7AF-0-7	Filament	2.0	0.60	.....	.....	.....	Same as 1F7G Except Diodes One Above the Other on Negative Filament.	90	6.0	.....	2.3	.....	10,700	895	8.8	.....	1F7GV
1G4GT	GT	Triode	5S-0-0	Filament	1.4	0.05	.....	.....	.....	Amplifier	90	6.0	90	8.5	2.5	133,000 $\downarrow$	1,500	.....	.....	1G4GT
1G5G	ST-14	Pentode	6X-0-0	Filament	2.0	0.12	.....	.....	.....	Power Amp.	90	0.0	.....	1.0#	.....	45,000 $\downarrow$	675	30	.....	1G5G
1G6GT	GT	Duotriode	7AB-0-0	Filament	1.4	0.10	.....	.....	.....	Power Amp. Class B	90	0.0	.....	1.0#	.....	45,000	675	30	(Each Triode Class A) 12,000†	1G6GT
1H4G	ST-12	Triode	5S-0-0	Filament	2.0	0.06	.....	.....	.....	Det. Amp.	90	4.5	.....	2.5	.....	11,000	850	9.3	.....	1H4G
											135	9.0	.....	3.0	.....	10,300	900	9.3	.....	
											180	13.5	.....	3.1	.....	10,300	900	9.3	.....	

1) Values are given shielded unless marked with (2).

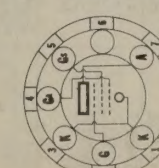
2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output.

3) Has special mechanical and/or life characteristics. With Average Power Input of 390 Mw. Grid to Grid. For two tubes with 40 volts RMS applied to each grid.


☐ Applied through 20,000 ohms.  
\* Per Tube or Section.  
† Plate and Target Supply Voltage.

☐ Pentode Operation.  
† Plate to Plate.  
# Approximate.

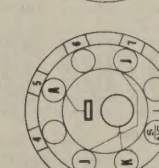
(1) Values are given shielded unless marked with (\*).  
(2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output.  
(3) Has special mechanical and/or life characteristics.  
\* With Average Power Input of 350 Mw. Grid to Grid.  
† For two tubes with 40 volts RMS applied to each grid.  
□ Applied through 30,000 ohms.  
▲ Conversion Transconductance.  
\*\* Triode Operation.  
† Pentode Operation.  
‡ Plate to Plate.  
§ Approximate.



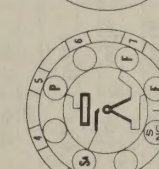
OA5



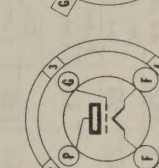
3-C




4-AJ




4-BU



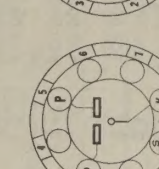
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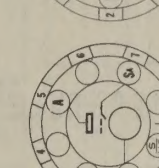
4-K




4-M




4-R



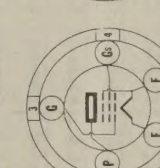
5-BF




5-BO




5-CF




5-K




5-R




5-S




5-Y




6-AU




6-AR




6-L




6-W




7-AB




7-AD




7-AF




7-Z



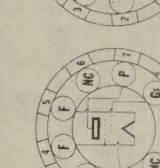
8-AJ



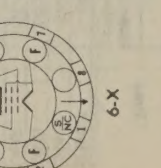
8-C




8-CN



8-CP



8-DN



9-Y

SYMBOLS FOR BASE DIAGRAMS: A—Anode; A1—Anode 1; A2—Anode 2; D1—Deflector 1; Dp—Diode Plate; F—Filament; Fc—Filament Center; G—Control Grid; Ga—Anode Grid; Gm—Modulator Grid; Go—Oscillator Grid; Gq—Quadrature Grid; Gs—Screen Grid; H—Heater; Hc—Heater Center; Ht—Heater Tap; IC—Internal Connection; J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode; Su—Suppressor Grid; T—Target; X3—External Shield; □—Locating Pin.

# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in $\mu\mu\text{f}$ .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transcon- ductance Micromhos	Ampli- fication Factor	Ohms Load for Rated Power Output	Undis- torted Power Output Milli- watts	Type					
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Coat																	
1H5GT	GT	Diode Triode	5Z-1-7	Filament	1.4	0.05	1.1	0.35	4.0	Det. Amp.	90	0.0	.....	0.15	.....	240,000	275	65	.....	1H5GT						
1H6G	ST-12	Duodiode Tri.	7A-A-0-6	Filament	2.0	0.06	3.6	1.6	1.9	Det. Amp.	135	3.0	.....	0.8	.....	35,000	575	20	.....	1H6G						
1J5G	ST-14	Pentode	6X-0-0	Filament	2.0	0.12	.....	.....	.....	Power Amp.	135	16.5	135	7.0	2.0	125,000	1,000	125	13,500	575	1J5G					
1J6G	ST-12	Duodiode	7AB-0-0	Filament	2.0	0.24	.....	.....	.....	Power Amp.	Characteristics Same as Type 19.											.....	.....	.....	.....	1J6G
1L4	Miniature	Pentode	6AR-0-1&5	Filament	1.4	0.05	.008m	3.8	7.5	R-F Amp.	90	0	67.5	2.9	1.8	600,000	925	.....	.....	.....	1L4					
1L6	Miniature	Heptode	7DC-0-0	Filament	1.4	0.05	0.36m	7.5	12.0	Converter	90	0	45	0.5	2.0	650,000	300	(Ga = 90 V., 1.2 Ma.)	.....	.....	1L6					
1LA4	Lock-in	Pentode	5AD-L-0	Filament	1.4	0.05	.....	.....	.....	Power Amp.	85	4.5	85	3.5	0.7	300,000	800	.....	25,000	100	1LA4					
1LA6	Lock-in	Heptode	7AK-L-0	Filament	1.4	0.05	0.4	7.5	8.0	Converter	90	0.0	45	0.55	0.6	750,000	950	(Ga = 90 V. Max., 1.2 Ma.)	.....	35	1LA6					
1LB4	Lock-in	Pentode	5AD-L-0	Filament	1.4	0.05	.....	.....	.....	Power Amp.	45	4.5	60	3.8	0.8	200,000	875	.....	16,000	100	1LB4					
1LB6	Lock-in	Heptode	8AX-L-0	Filament	1.4	0.05	0.1	3.8	8.0	Converter	90	0.0	67.5	0.40	2.2	2 Meg.	100	.....	12,000	200	1LB6					
1LC5	Lock-in	Pentode	7AO-L-8	Filament	1.4	0.05	.007m	3.2	7.0	R-F Amp.	45	0.0	45	1.1	0.30	700,000	750	.....	.....	.....	1LC5					
1LC6	Lock-in	Heptode	7AK-L-0	Filament	1.4	0.05	0.28	9.0	5.5	Converter	45	0.0	35	0.7	0.75	300,000	950	(Ga = 45 V. Max., 1.4 Ma.)	.....	.....	1LC6					
1LD5	Lock-in	Diode Pent.	6AX-L-8	Filament	1.4	0.05	0.18	3.2	6.0	Amplifier	45	0.0	45	0.55	0.1	750,000	550	.....	.....	.....	1LD5					
1LE3	Lock-in	Triode	4AA-L-0	Filament	1.4	0.05	1.7	1.7	3.0	Amplifier	90	0.0	.....	4.5	.....	11,200	1,300	14.5	.....	.....	1LE3					
1LG5	Lock-in	Pentode	7AO-L-8	Filament	1.4	0.05	.007m	3.2	7.0	R-F Amp.	45	0	45	1.5	0.45	350,000	800	.....	.....	.....	1LG5					
1LH4	Lock-in	Diode Triode	5AG-L-1	Filament	1.4	0.05	.....	.....	.....	Det. Amp.	90	0.0	.....	0.15	.....	240,000	975	65	.....	.....	1LH4					
1LN5	Lock-in	Pentode	7AO-L-8	Filament	1.4	0.05	.007m	3.4	8.0	R-F Amp.	90	0.0	90	1.6	0.35	1.1 Meg.	800	.....	.....	.....	1LN5					
1N5GT	GT	Pentode	5Y-1-7	Filament	1.4	0.05	.007m	2.8	10.0	R-F Amp.	90	0.0	90	1.2	0.3	1.5 Meg.	750	.....	.....	.....	1N5GT					
1N6GT	GT	Diode Pent.	7AM-0-0	Filament	1.4	0.05	.....	.....	.....	Det. Amp.	90	4.5	90	3.4	0.7	300,000	800	.....	25,000	100	1N6GT					
1P5GT	GT	Pentode	5Y-1-7	Filament	1.4	0.05	.007m	3.0	10.0	R-F Amp.	90	0.0	90	2.3	0.7	800,000	750	.....	.....	.....	1P5GT					
1Q5GT	GT	Beam Amp.	6AF-0-0	Filament	1.4	0.10	.....	.....	.....	Power Amp.	90	4.5	90	9.5	1.3	.....	2,200	8,000	.....	.....	1Q5GT					
1Q6	T-3	Diode Pent.	8CO-0-0	Filament	1.25	0.04	0.085	1.8	4.2	Det. Amp.	30	0.0	30	0.33	0.09	500,000	330	.....	.....	.....	1Q6					
1R4	Lock-in	H. F. Diode	4AH-L-2	Cathode	1.4	.150	.....	.....	.....	Detector	45	0.0	45	0.7	1.9	600,000	935	.....	.....	.....	1R4					
1R5	Miniature	Heptode	7AT-0-0	Filament	1.4	0.05	0.4m	7.0	12.0	Converter	90	0.0	67.5	1.7	3.0	500,000	300	.....	.....	.....	1R5					
1S4	Miniature	Pentode	7AV-0-0	Filament	1.4	0.1	.....	.....	.....	Power Amp.	45	4.5	45	3.8	0.8	100,000	1,250	8,000	.....	65	1S4					
1S5	Miniature	Diode Pent.	6AU-0-0	Filament	1.4	0.05	0.2	2.0	4.0	Det. Amp.	67.5	0.0	67.5	1.6	0.4	600,000	625	.....	8,000	270	1S5					
1S6	T-3	Diode Pent.	8DA-0-0	Filament	1.25	.040	.....	.....	.....	Det. Amp.	30	0	30	0.33	0.1	500,000	330	.....	.....	.....	1S6					
1SA6GT	GT	Pentode	6BD-0-0	Filament	1.4	0.05	.01m	5.2	8.6	R-F Amp.	45	0	45	1.1	0.3	700,000	750	.....	.....	.....	1SA6GT					
1SB6GT	GT	Diode Pent.	6BE-0-0	Filament	1.4	0.05	0.25	3.2	3.0	Det. Amp.	90	0	67.5	2.45	0.68	600,000	970	.....	.....	.....	1SB6GT					
1T4	Miniature	Pentode	6AR-0-1&5	Filament	1.4	0.05	.008m	3.8	7.5	R-F Amp.	45	0.0	45	1.9	0.7	350,000	700	.....	.....	.....	1T4					
1T5GT	GT	Beam Amp.	6X-0-0	Filament	1.4	0.05	0.5	4.8	8.0	Power Amp.	90	6.0	90	6.5	1.4	.....	1,150	.....	14,000	170	1T5GT					
1T6	T-3	Diode Pent.	8DA-0-0	Filament	1.25	.040	.....	.....	.....	Det. Amp.	45	0	45	0.33	0.1	500,000	330	.....	.....	.....	1T6					
1U4	Miniature	Pentode	6AR-0-1&5	Filament	1.4	0.05	0.008m	3.6	7.5	R-F Amp.	90	0	90	1.6	0.45	1.5 Meg.	900	.....	.....	.....	1U4					
1U5	Miniature	Diode Pent.	6BW-0-0	Filament	1.4	0.05	0.2	2.2	2.4	Det. Amp.	67.5	0	45	0.5	0.6	550,000	960	(Ga = 67.5 V., 0.95 Ma.)	.....	.....	1U5					
1U6	Miniature	Heptode	7DC-0-0	Filament	1.4	0.025	0.4	8.0	12.0	Converter	90	0	45	0.55	0.55	600,000	975	(Ga = 90 V., 1.1 Ma.)	.....	.....	1U6					
1V	ST-12	Diode	4G-0-0	Cathode	6.3	0.30	.....	.....	.....	H-W Rect.	325 A.C. Volts Per Plate, RMS, 45 Ma. Output Current. Condenser Input to Filter.											.....	.....	.....	1V	
1V2	T-6½	Diode	9U-0-0	Filament	0.625	0.3	.....	.....	.....	H-W Rect.	Television Service. RF or Flyback Supply. Peak Inverse Volts = 17.5 KV, Output = 1 Ma.											.....	.....	.....	1V2	
1V5	T-3	Pentode	8CP-0-0	Filament	1.25	0.04	.....	.....	.....	Power Amp.	Television Service. RF or Flyback Supply. Peak Inverse Volts = 22 KV, Output = 1 Ma.											.....	.....	.....	1V5	
1W4	Miniature	Pentode	5BZ-0-0	Filament	1.4	0.05	.....	.....	.....	Power Amp.	45	4.5	45	1.6	0.3	400,000	650	.....	20,000	35	1W4					
1W5	T-3	Pentode	8CP-0-0	Filament	1.25	0.04	0.01m	2.3	3.5	R-F Amp.	67.5	0.0	67.5	1.85	0.75	700,000	735	.....	16,000	90	1W5					
1X2	T-6½	Diode	9Y-0-1 etc.	Filament	1.25	0.2	.....	.....	.....	H-W Rect.	Television Service. RF or Flyback Supply. Peak Inverse Volts = 15 KV, Output = 1 Ma.											.....	.....	.....	1X2	
1X9A	T-6½	Diode	9Y-0-1 etc.	Filament	1.25	0.20	.....	.....	.....	H-W Rect.	Television Service. RF or Flyback Supply. Peak Inverse Volts = 17.5 KV, Output = 1 Ma.											.....	.....	.....	1X9A	
1X8B	T-6½	Diode	9Y	Filament	1.25	0.2	.....	.....	.....	H-W Rect.	Television Service. RF or Flyback Supply. Peak Inverse Volts = 22 KV, Output = 1 Ma.											.....	.....	.....	1X8B	

# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction		Emitter			Note (1) (2) Capacitances in $\mu\text{f}$ .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transcon- ductance Micromhos	Ampli- fication Factor	Ohms Load for Stated Power Output	Undis- torted Power Output Milli- watts	Type
	Bulb Size or Style	Class	Base Diag.	Type	Volts	Amps.	Cgp.	Cin.												
1Y2	ST-12	Diode	4P-0-0	Filament	1.5	0.29	.....	.....	.....	H-W Rect.	15,000 A-C Volts Per Plate, RMS, 2.0 Ma. Output Current.	.....	.....	.....	.....	.....	.....	.....	.....	1Y2
1Z2	Miniature	Diode	7CB-0-0	Filament	1.5	0.30	.....	.....	.....	H-W Rect.	7,800 Volts RMS Plate, 2.0 Ma. D.C. Output Current.	.....	.....	.....	.....	.....	.....	.....	.....	1Z2
2A3	ST-16	Triode	4D-0-0	Filament	2.5	2.50	16.0	7.0	5.0	Power Amp. Class AB1	250 45.0 300 62.0	.....	60.0 40.0 Per Tube, Push Pull, Fixed Bias	.....	800	5,250	4.2	2,500 3,000†	3,500 15,000	2A3
2A4G	ST-12	Gas Triode	5S-0-0	Filament	2.5	2.50	.....	.....	.....	Relay Tube	Instantaneous Forward or Inverse Anode Volts = 200 Peak Anode Amps. = 1.25 Average Anode. Current = 0.1 Amp. Max. Averaging Time = 45 Seconds. Cold Starting Time = 2 Seconds.	.....	.....	.....	.....	.....	.....	.....	.....	2A4G
2A5	ST-14	Pentode	6B-0-0	Cathode	2.5	1.75	.....	.....	.....	Power Amp.	Characteristics Same as Type 6F6G.	.....	.....	.....	.....	.....	.....	.....	.....	2A5
2A6	ST-12	Duodiode Tri.	6G-0-0	Cathode	2.5	0.80	1.7	1.7	3.8	Det. Amp.	250 2.0	.....	0.9	.....	.....	91,000	100	.....	.....	2A6
2A7	ST-12	Heptode	7C-0-0	Cathode	2.5	0.80	0.3m	8.5	9.0	Converter	Characteristics Same as Type 6A7.	.....	.....	.....	.....	.....	.....	.....	.....	2A7
2A7S	ST-12	Heptode	7C-6-0	Cathode	2.5	0.80	.....	.....	.....	.....	Characteristics Same as Type 6B7.	.....	.....	.....	.....	.....	.....	.....	.....	2A7S
2B7	ST-12	Duodi. Pent.	7D-0-6	Cathode	2.5	0.80	.....	.....	.....	Det. Amp.	Characteristics Same as Type 6B7.	.....	.....	.....	.....	.....	.....	.....	.....	2B7
2B7S	Miniature	Gas Triode	5AS-0-0	Cathode	2.5	0.65	.....	.....	.....	Relay Tube	Characteristics Same as Type 6B7.	.....	.....	.....	.....	.....	.....	.....	.....	2B7S
2C4	ST-12	Duodiode	7BH-0-0	Cathode	6.3	0.6	2.4 1.6	2.6 1.6	1.4 2.0	Amplifier Power Amp.	250 16.5 250 60.0	.....	8.3 20.0	.....	7,600	1,375	10.4	20,000	3,500	2C4
2C22	T-9	Triode	4AM-0-0	Cathode	6.3	0.3	3.6	9.2	0.7	Amplifier	300 10.5	.....	11.0	.....	6,600	3,000	20.0	.....	.....	2C22
2C51	T-6½	Duodiode	8CJ-0-5	Cathode	6.3	0.30	1.3	2.2	1.0	Amplifier	150 2.0	.....	8.2	.....	5,500	5,500	35	.....	.....	2C51
2C52	GT	Duodiode	8BD-0-0	Cathode	12.6	0.3	2.7*	2.3*	0.75*	Amplifier	250 2.0	.....	1.3	.....	1,900	1,900	100	.....	.....	2C52

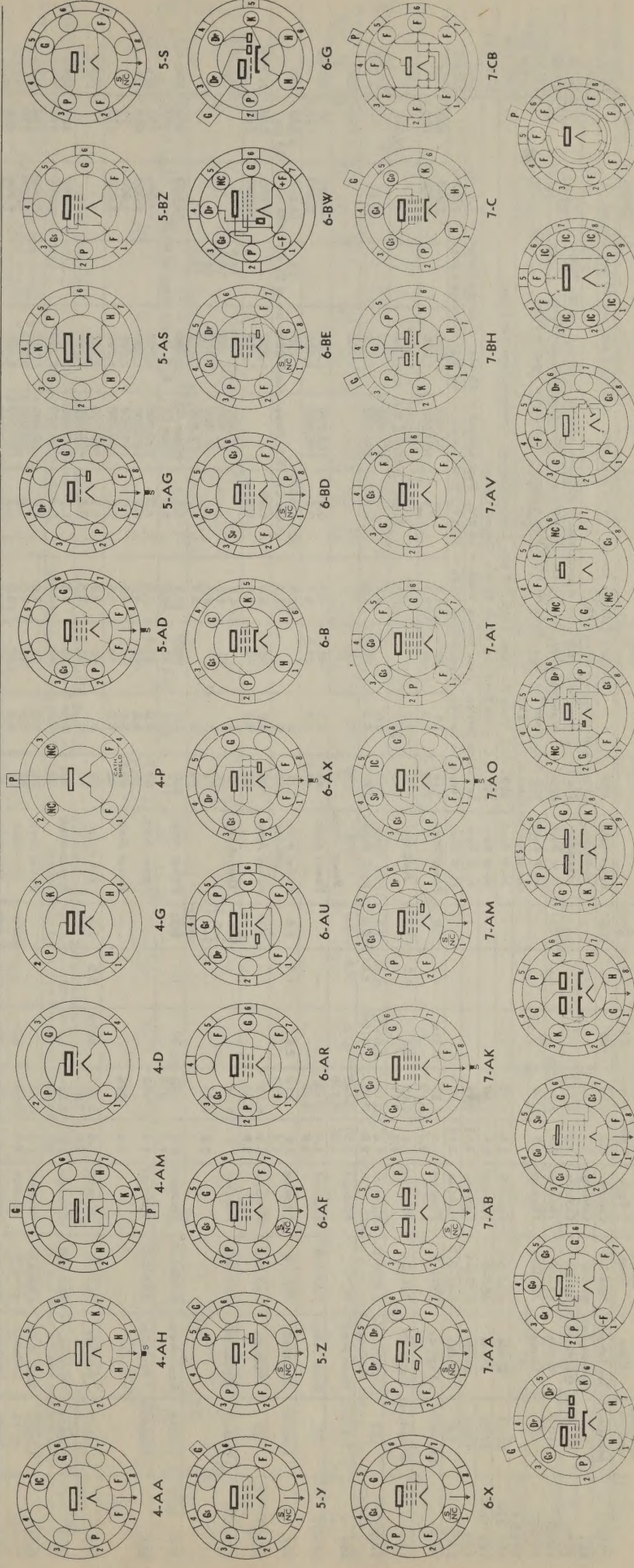
(1) Values are given shielded unless marked with (\*).

(2) Converter tube capacitances given are signal grid to plate;  
RF Input, Mixer Output.

(3) Has special mechanical and/or life characteristics.  
† With Average Power Input of 320 Mw. Grid to Grid.  
‡ For two tubes with 40 volts RMS applied to each grid.

□ Applied through 20,000 ohms.  
▲ Conversion Transconductance.  
# Plate and Target Supply Voltage.  
\* Triode Operation.  
† Pentode Operation.  
‡ Plate to Plate.  
\* Approximate.

(1) Values are given shielded unless marked with (\*).  
 (2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output.  
 (3) Has special mechanical and/or life characteristics.  
 † With Average Power Input of 320 Mw. Grid to Grid.  
 ‡ For two tubes with 40 volts RMS applied to each grid.  
 \* Applied through 250,000 ohms.  
 † Pentode Operation.  
 ‡ Conversion Transconductance.  
 ‡ Triode Operation.



SYMBOLS FOR BASE DIAGRAMS: A—Anode, A1—Anode 1, A2—Anode 2, D1—Deflector 1, D2—Deflector 2, F—Filament, Fc—Filament Center, G—Control Grid, Gm—Modulator Grid, Go—Oscillator Grid, Gq—Quadrature Grid, Gs—Screen Grid, H—Heater, Hc—Heater Center, Hs—Heater Tap, IC—Internal Connection, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, Su—Suppressor Grid, T—Target, XS—External Shield, □—Top Cap, →—Locating Pin.

# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Bulb Size or Style	Construction		Emitter			Note (1) (?) Capacities in $\mu\text{f.}$			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type		
		Class	Basins Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout														
2D21	Miniature	Gas Tetrode	7BN-0-0	Cathode	6.3	0.60	.02*	2.4*	1.6*	Relay Tube	400	5	Average Cathode Current = 100 Max. Ma., Averaged over any 30 Sec. Interval.										2D21
2E5	T-9	Electron Ray	6R-0-0	Cathode	2.5	0.80				Indicator	Characteristics Same as Type 6E5.										2E5		
2S/4S	ST-12	Duodiode	5D-4-0	Cathode	2.5	1.35				Detector	The Two Diode Plates each Draw Approximately 40.0 Ma. with 50 Volts D.C. on the Plates.										2S/4S		
2V3G	ST-12	Diode	4Y-0-0	Filament	2.5	5.0				H-W Rect.	6000 A.C. Volts Per Plate, RMS, 2 Ma. Output Current.	Condenser Input to Filter.										2V3G	
2W3GT	GT	Diode	4X-0-0	Filament	2.5	1.50				H-W Rect.	350 A.C. Volts Per Plate, RMS, 55 Ma. Output Current.	Condenser Input to Filter.										2W3GT	
2X2A (3)										Characteristics Same as Type 2X2										2X2A (3)			
2X2/879	ST-12	Diode	4AB-0-0	Cathode	2.5	1.75				H-W Rect.	4500 A.C. Volts Per Plate, RMS, 7.5 Ma. Output Current.	Condenser Input to Filter.										2X2/879	
2Z2/G84	ST-12	Diode	4B-0-0	Filament	2.5	1.50				H-W Rect.	350 A.C. Volts Per Plate, RMS, 50 Ma. Output Current.											2Z2/G84	
3A2	T-6 1/2	Diode	9DT-0-1	Cathode	3.15	0.22				H-W Rect.	Television Service. Peak Inverse Volts = 18 KV. Peak Current = 80 Ma. Average Current = 1.5 Ma.										3A2		
3A3	T-9	Diode	4AC-0-7	Cathode	3.15	0.22				H-W Rect.	Television Service. Peak Inverse Volts = 30 KV. Peak Current = 80 Ma. Average Current = 1.5 Ma.										3A3		
3A4	Miniature	Pentode	7BB-0-0	Filament	2.8	0.10	0.35m	4.8	7.0	Power Amp.	135	7.5	90	14.8	90	2.6	90,000	1,900	8,000	600	3A4		
3A5	Miniature	Duodiode	7BC-0-0	Filament	2.8	0.22	3.0	1.1	1.9	Amplifier	90	2.5	30.0	30.0	30.0	30.0	1,800#	1,800#	2,000	700	3A5		
3A8GT	GT	Diode Triode Pentode	8AS-0-1	Filament	2.8	0.05	.012m	2.6	4.2	Tri. Amp. Pent. Amp.	90	0.0	0.2	0.2	0.2	300,000	325	200,000	8,000	2,000	3A8GT		
3B4	T-5 1/2	Beam Amp.	7CY	Filament	2.8	0.165	0.16	4.6	7.6	VHF Power Amp.	150	75	135	135	135	800,000	750	1,700	1,250	3B4			
3B5GT	GT	Beam Amp.	7AP-0-0	Filament	2.8	0.10				Power Amp.	45	4.5	45	4.4	0.3	100,000	1,400	8,000	70	3B5GT			
3B7	Lock-in	Duodiode	7BE-L-0	Filament	2.8	.110	2.6	1.4	2.6	Power Amp. Oscillator	135	0	22.0	22.0	(Class AB2)	100,000	1,500	5,000	180	3B7			
3C5GT	GT	Pentode	7AP-0-0	Filament	2.8	0.05				Power Amp.	90	9.0	90	6.0	1.4	R.F. Power Amp. 2800 mw at 25 mc	1,900	20	16,000	1,500	3C5GT		
3C6/XXB	Lock-in	Duodiode	7BW-0-0	Filament	2.8	0.10				Power Amp.	90	9.0	90	6.0	1.4	1,550	1,450	10,000	260	3C6/XXB			
3D6	Lock-in	Beam Amp.	6AA-L-0	Filament	2.8	.110	.30	7.5	6.5	Power Amp.	150	20.0	135	23.0	6.0	(Class A) R.F. Power Amp. at 50 mc.	2,400	14,000	600	3D6			
3E5	Miniature	Pentode	6BX-0-0	Filament	1.4	.050				Power Amp.	67.5	5.0	67.5	5.0	1.0	180,000	1,300	7,000	100	3E5			
3E6	Lock-in	Pentode	7CJ-L-5	Filament	2.8	0.05	.007m	5.5	7.5	Power Amp.	90	8.0	67.5	4.5	1.5	140,000	1,200	8,000	900	3E6			
3LE4	Lock-in	Pentode	6BA-L-0	Filament	2.8	0.10				Power Amp.	90	9.0	90	10.0	2.0	110,000	1,600	6,000	300	3LE4			
3LF4	Lock-in	Beam Amp.	6BA-L-0	Filament	2.8	0.05				Power Amp.	85	5.0	85	7.0	0.8	70,000	1,950	9,000	250	3LF4			
3Q4	Miniature	Pentode	7BA-0-0	Filament	2.8	0.10				Power Amp.	90	4.5	90	9.5	1.3	90,000	2,200	8,000	270	3Q4			
3Q5GT	GT	Beam Amp.	7AP-0-0	Filament	2.8	0.05				Power Amp.	110	6.6	110	10.0	1.4	100,000	2,200	8,000	400	3Q5GT			
3S4	Miniature	Pentode	7BA-0-0	Filament	2.8	0.05	.30	5.0	7.0	Power Amp.	90	4.5	90	8.0	1.0	80,000	2,000	8,000	230	3S4			
3V4	Miniature	Pentode	6BX-0-0	Filament	2.8	0.05				Power Amp.	110	6.6	110	8.5	1.1	110,000	2,000	8,000	330	3V4			
4A6G	ST-12	Duodiode	8L-0-0	Filament	2.0	0.12				Power Amp.	85	5.0	85	6.9	1.5	120,000	1,975	10,000	250	4A6G			
5A6	T-6 1/2	Pentode	9L-0-0	Filament	5.0	.230	0.10	8.5	9.5	Power Amp.	90	4.5	90	9.5	2.1	100,000	2,150	10,000	270	5A6			
5AW4	T-12	Duodiode	5T-0-0	Filament	5.0	4.0				Power Amp.	90	4.5	90	8.0	1.3	90,000	2,200	8,000	240	5AW4			
5AX4GT	GT	Duodiode	5T-0-0	Filament	5.0	2.25				Power Amp.	90	4.5	90	9.5	1.0	80,000	2,000	8,000	230	5AX4GT			
5AZ4	Lock-in	Duodiode	5T-L-0	Filament	5.0	2.0				Power Amp.	90	7.0	67.5	7.4	1.4	100,000	1,575	8,000	270	5AZ4			
5R4GY	ST-16	Duodiode	5T-0-0	Filament	5.0	2.0				Power Amp.	90	7.0	67.5	6.1	1.1	100,000	1,495	8,000	235	5R4GY			
5T4	Metal	Duodiode	5T-0-0	Filament	5.0	2.0				Power Amp.	90	1.5	11	10.8	20	96,600	750	8,000	1,000	5T4			
5U4G	ST-16	Duodiode	5T-0-0	Filament	5.0	3.00				Power Amp.	90	1.5	10.8	10.8	20	96,600	750	8,000	1,000	5U4G			
5U4GA	T-11	Duodiode	5T-0-0	Filament	5.0	3.0				Class B. Amp. Class C. Amp.	150	15	139.5	40	7	Class B. Max. Signal			2,800	5A6			
5U4GB	T-12	Duodiode	5T-0-0	Filament	5.0	3.0				F-W Rect.	450 A.C. Volts Per Plate, RMS, 250 Ma. Output Current with Cap. Input to Filter. Peak Current = 750 Ma. Per Plate											5A6	
5U4WG (3)	T-12	Duodiode	5T-0-0	Filament	5.0	3.00				F-W Rect.	450 A.C. Volts Per Plate, RMS, 250 Ma. Output Current.											5AW4	
5V4G	ST-14	Duodiode	5L-0-0	Cathode	5.0	2.00				F-W Rect.	350 A.C. Volts Per Plate, R.M.S., 150 Ma. D.C. Output Current. Condenser Input to Filter.											5AX4GT	
5V4GA	T-12	Duodiode	5L-0-0	Cathode	5.0	2.0				F-W Rect.	300 A.C. Volts Per Plate, R.M.S., 150 Ma. D.C. Output Current. Choke Input to Filter.											5A6	

# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction		Emitter		Note (1) (2) Capacitances in $\mu\mu\text{f}$ .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transcon- ductance Micromhos	Ampli- fication Factor	Ohms Load for Stated Power Output	Undis- torted Power Output Milli- watts	Type
	Bulb Size or Style	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.												
5W4	Metal	Duodiode	5T-1-0	Filament	5.0	1.50	.....	.....	F-W Rect.	350 A.C. Volts Per Plate, RMS, 110 Ma. Output Current.	Condenser Input to Filter.								5W4
5W4GT	GT	Duodiode	5T-0-0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5W4GT	
5X3	ST-14	Duodiode	4C-0-0	Filament	5.0	2.0	.....	.....	Rectifier	400 A.C. Volts Per Plate, RMS, 110 Ma. Output Current. 1275 A.C. Volts Per Plate, RMS, 30 Ma. Output Current.	Choke or Condenser Input to Filter.								5X3
5X4G	ST-16	Duodiode	5Q-0-0	Filament	5.0	3.00	.....	.....	F-W Rect.	450 A.C. Volts Per Plate, RMS, 225 Ma. Output Current.	Condenser Input to Filter.								5X4G
5Y3GT	GT	Duodiode	5T-0-0	Filament	5.0	2.00	.....	.....	F-W Rect.	350 A.C. Volts Per Plate, RMS, 125 Ma. Output Current. 500 A.C. Volts Per Plate, RMS, 125 Ma. Output Current.	Condenser Input to Filter. Choke Input to Filter.								5Y3GT
5Y4G	ST-14	Duodiode	5Q-0-0	Filament	5.0	2.00	.....	.....	F-W Rect.	Characteristics Same as Type 5Y3GT.								5Y4G	
5Z3	ST-16	Duodiode	4C-0-0	Filament	5.0	3.0	.....	.....	F-W Rect.	450 A.C. Volts Per Plate, RMS, 225 Ma. Output Current.	Condenser Input to Filter.								5Z3
5Z4	Metal	Duodiode	5L-1-0	Cathode	3.0	2.00	.....	.....	F-W Rect.	Characteristics Same as Type 5Z4GT.								5Z4	
5Z4GT	GT	Duodiode	5L-0-0	Cathode	5.0	2.00	.....	.....	F-W Rect.	350 A.C. Volts Per Plate, RMS, 125 Ma. Output Current.	Condenser Input to Filter.								5Z4GT
6A3	ST-16	Triode	4D-0-0	Filament	6.3	1.00	16.0	7.0	5.0	Power Amp.	250 45.0 325 68.0 325 40.0# 40.0#	800 (Push Pull, Fixed Bias) 5,250 (Push Pull, Self Bias Resistor 850 Ohms)	4.2 .....	2,500 3,000* 15,000 5,000*	3,200 15,000 10,000	.....	.....	6A3	
6A4/LA	ST-14	Pentode	5B-0-0	Filament	6.3	0.30	.....	.....	Power Amp.	135 9.0 180 12.0	52,600 2,100 60,000	150 9,500 150	.....	.....	.....	.....	.....	6A4/LA	
6A5G	ST-16	Triode	6T-0-0	Cathode	6.3	1.25	.....	.....	Power Amp. p.p.AB1 Amp.	250 45.0 325 68.0	60,000 2,500 300	4.2 .....	2,500 3,000* 15,000	3,750 15,000	.....	.....	6A5G		
6A6	ST-14	Duodiode	7B-0-0	Cathode	6.3	0.80	.....	.....	Power Amp. Driver	300 0.0 250 5.0 294 6.0	40.0 Per Tube, Push Pull, Fixed Bias 17.5 Per Plate, Class B Operation, Zero Signal 11,300 11,000	35 35	10,000* 10,000 (Class A Driver)	.....	.....	.....	6A6		
6A7, 6A7S	ST-12	Heptode	7C-0-0	Cathode	6.3	0.30	0.3	8.5	9.0	Converter	Characteristics Same as Type 6A8G, Except Capacitances.								6A7, 6A7S
6A8	Metal	Heptode	8A-1-0	Cathode	6.3	0.30	.06	12.0	12.0	Converter	100 1.5 250 3.0	1.3 2.7	360,000 550 A	360 A	.....	.....	.....	6A8	
6A8G	ST-12	Heptode	8A-0-0	Cathode	6.3	0.30	.26	9.5	12.0	Converter	100 1.5 250 3.0	1.3 2.7	360,000 550 A	360 A	.....	.....	.....	6A8G	
6A8GT	GT	Heptode	8A-1-0	Cathode	6.3	0.30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6A8GT	

(1) Values are given shielded unless marked with (\*).

(2) Converter tube capacitances given are signal grid to plate;  
RF input, Mixer Output.

(3) Has special mechanical and/or life characteristics.  
With Average Power Input of 320 Mw. Grid to Grid.  
For two tubes with 40 volts RMS applied to each grid.

\* Applied through 250,000 ohms.  
# Per Tube or Section.  
\*\* Conversion Transconductance.  
\*\*\* Triode Supply Voltage.

□ Pentode Operation.  
▲ Plate to Plate.  
△ Approximate.

m maximum  
■ Cathode Resistor

(1) Values are given shielded unless marked with (\*).

(2) Converter tube capacitances given are signal grid to plate;

RF input, Mixer Output.

(3) Has special mechanical and/or life characteristics.

§ With Average Power Input of 320 Mw. Grid to Grid.

†† For two tubes with 40 volts RMS applied to each grid.

\* Applied through 250,000 ohms.

# Per Tube or Section.

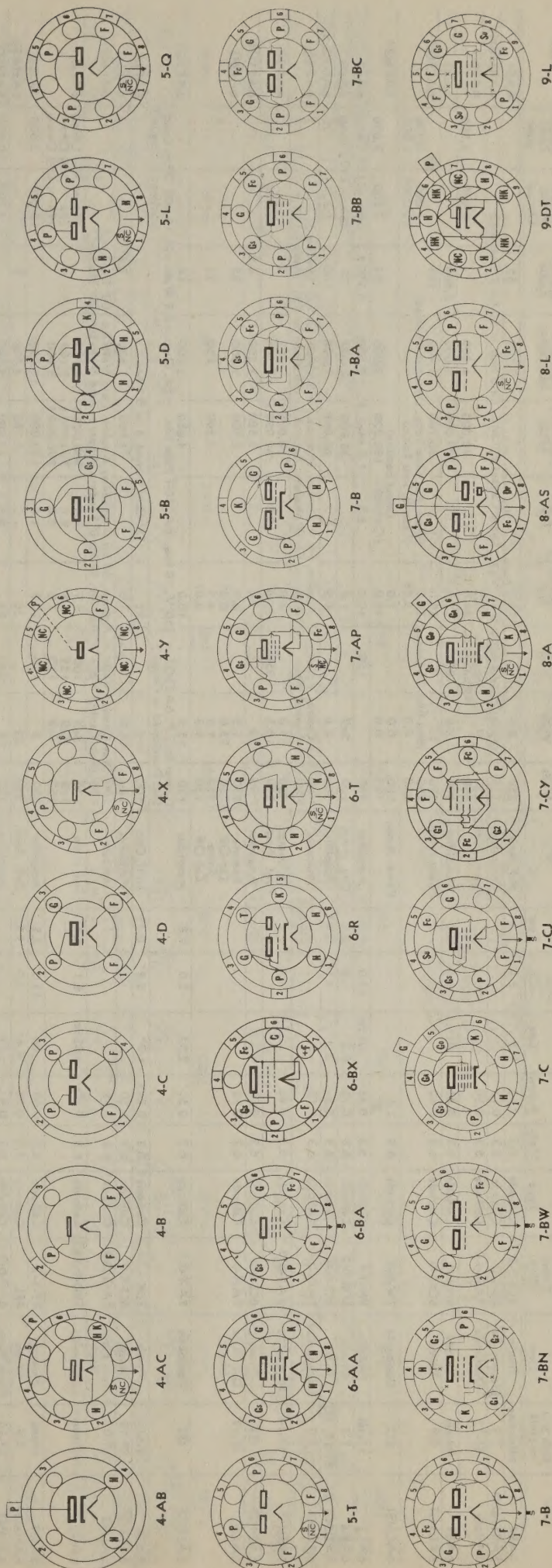
§ Conversion Transconductance.

\*\* Triode Operation.

† Pentode Operation.

‡ Plate to Plate.

♦ Approximate.



SYMBOLS FOR BASE DIAGRAMS: A—Anode; A1—Anode 1; A2—Anode 2; D1—Deflector 1; D2—Deflector 2; F—Filament; Fc—Filament Center; G—Control Grid; Gm—Modulator Grid; Go—Oscillator Grid; Gq—Quadrature Grid; Gs—Screen Grid; H—Heater; Hc—Heater Center; Ht—Heater Tap; IC—Internal Connection; J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode; Su—Suppressor Grid; T—Target; XS—External Shield; □—Top Cap; →—Locating Pin.

# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction		Emitter		Note (1) (2) Capacitances in $\mu\text{f}$ .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transcon- ductance Micromhos	Ampli- fication Factor	Ohms Load for Rated Power Output	Undis- torted Power Output Milli- watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout										
6AB4	Miniature	Triode	5CE-0-2	Cathode	6.3	0.15	1.5	2.4	1.4	250	2.0	10			5,500	55			6AB4
6AB5/6N5	T-9	Electron Ray	6R-0-0	Cathode	6.3	0.15				135 $\frac{1}{2}$	(Series Plate Resistor 0.25 Meg., Target Current 2.0 Ma., Grid Bias = 10 for 0° Shadow.)								6AB5/6N5
6AB6G	ST-12	Duodiode	7AU-0-0	Cathode	6.3	0.50				250	0	5.0			40,000		8,000	3,500	6AB6G
6AB7	Metal	Pentode	8N-1-1	Cathode	6.3	0.45	.015m	8.0	5.0	250	3.0	12.5			700,000 $\frac{1}{2}$	3,500			6AB7
6AC5GT	T-9	Triode	6Q-0-0	Cathode	6.3	0.40				250	+13 (Bias from 76 Driver)	39.0			36,700	3,400	7,000	3,700	6AC5GT
										250	0.0	5.0#			(Class A-1, One Tube, Dynamic Coupled)	10,000 $\frac{1}{2}$	8,000		
6AC6GT	GT	Duodiode	7W-0-0	Cathode	6.3	1.1				180	0.0								6AC6GT
6AC7	Metal	Pentode	8N-1-1	Cathode	6.3	0.45	.015m	11.0	5.0	180	0.0								6AC7
6AD4	T-3	Triode	8DK-0-0	Cathode	6.3	0.15	0.7	1.9	2.9	300	Self	10.0			1.0 Meg. $\frac{1}{2}$	9,000	6,750 $\frac{1}{2}$	(Rk = 160 Ohms)	6AD4
6AD5G, GT	ST-12, GT	Triode	6Q-0-0	Cathode	6.3	0.3	3.3*	4.1*	3.9*	100	Self	1.4			35,000	2,000	70	(Rk = 820 Ohms)	6AD5G, GT
6AD6G	T-9	Electron Ray	7AG-0-0	Cathode	6.3	0.15				250	2.0	0.9			66,000	1,500	100		6AD6G
6AD7G	ST-14	Tri. Pentode	8AY-0-0	Cathode	6.3	0.85				250	25.0	4.0			19,000 $\frac{1}{2}$	325	6		6AD7G
										250	15.5	34.0			80,000 $\frac{1}{2}$	2,500	7,000	3,200	
6AE5GT	GT	Triode	6Q-0-0	Cathode	6.3	0.30				95	1.5	7.0			3,500	1,200	4.2		6AE5GT
6AE6G	ST-12	Quo Plate Triode	7AH-0-0	Cathode	6.3	0.15				250	35.0	6.5			9,500	1,000	25		6AE6G
										250	1.5	0.01							
										250	1.5	4.5			3,500	950	33		
6AE7GT	GT	Duodiode	7AX-0-0	Cathode	6.3	0.50	2.5#	3.0	1.8	250	13.5	10.0			4,650	3,000	14		6AE7GT
										(Driver for P.P., 6AC5GT = 250 V., 10 Ma., 6AC5GT Plate Ma. = 64, Output 9.5 Watts with 10,000 Ohms Load Bias Developed in Circuit.)									
6AF4	T-5 $\frac{1}{2}$	Triode	7DK	Cathode	6.3	0.225	1.9*	2.2*	0.45*	100	-4	22			4,900	1,500	7.4		6AF4
6AF5G	ST-12	Triode	6Q-0-0	Cathode	6.3	0.30				180	18.0	7.0			4,900	1,500			6AF5G
6AF6G	T-9	Twin Elec. Ray	7AG-0-0	Cathode	6.3	0.15				100 $\frac{1}{2}$	(Ray Control Volts = Approx. 60 for 0° Shadow, Approx. Zero Volts for 100° Shadow.)								6AF6G
										135 $\frac{1}{2}$	(Ray Control Volts = Approx. 81 for 0° Shadow, Approx. Zero Volts for 100° Shadow.)								
6AG5	Miniature	Pentode	7BD-0-2&7	Cathode	6.3	0.30	0.025m	6.1	2.3	100	Self	5.5			300,000 $\frac{1}{2}$	4,750			6AG5
										125	Self	7.2			5,100	5,000			
										250	Self	7.0			800,000 $\frac{1}{2}$	5,000			
6AG7	Metal	Pentode	8Y-1-3	Cathode	6.3	0.65	.06	13.0	7.5	300	3	30.0			130,000	11,000	10,000	3,000	6AG7
6AH4GT	T-9	Triode	8EL	Cathode	6.3	0.75	4.4*	7.0	1.7	250	23	30			1,780	4,500	8		6AH4GT
6AH5G	ST-16	Beam Amp.	6AP-0-0	Cathode	6.3	0.9				350	18	250	54		33,000	5,200	4,200	10,800	6AH5G
6AH6	Miniature	Pentode	7BK-0-0	Cathode	6.3	0.45	0.02m	10	3.6	300	Self	150	10		500,000	9,000	(Rk = 160 Ohms)		6AH6
										150	Self	12.5			3,600	11,000	40		
6AH7GT	GT	Duodiode	8BE-0-0	Cathode	6.3	0.30				Characteristics Same as Type 12AH7GT.									
6AJ4	T-6 $\frac{1}{2}$	Triode	9BX	Cathode	6.3	0.225				125	68 $\frac{1}{2}$	16			4,200 $\frac{1}{2}$	10,000	42		6AJ4
6AJ5	Miniature	Pentode	7BD-0-0	Cathode	6.3	0.175	0.02	4.0	2.8	28	0.1	28	2.7		100,000	2,500	(Rk = 270 Ohms)		6AJ5
6AJ7	Metal	Pentode	8N-1-1	Cathode	6.3	0.45				300	Self	300	10.0		1 Meg. $\frac{1}{2}$	9,000	9,000	(Rk = 160 Ohms)	6AJ7
6AK4	T-3	Triode	8DK	Cathode	6.3	0.125	1.3	2.2	2.2	200	680 $\frac{1}{2}$	9.5			5,300	3,800	20		6AK4
6AK5	Miniature	Pentode	7BD-0-2&7	Cathode	6.3	0.175	.01	3.9	2.85	120		7.5			340,000	5,000	1,700		6AK5
										150		7.0			480,000	4,300	1,800		
										180		7.7			690,000	5,100	3,500		
6AK6	Miniature	Pentode	7BK-0-0	Cathode	6.3	0.15	0.12*	3.6*	4.2*	180	9.0	15.0			200,000	2,300	10,000	1,100	6AK6
6AK7	Metal	Duodiode	8Y-1-3	Cathode	6.3	0.65	0.06	13.0	7.5	300	3.0	30.0			130,000	11,000	10,000	3,000	6AK7
6AL5	Miniature	Duodiode	6BT-0-6	Cathode	6.3	0.30				117	A.C. Volts Per Plate, RMS, 9 Ma. Output Current. 300 Ohms Min. Effective Plate Supply Impedance.								6AL5
6AL6G	ST-16	Beam Amp.	6AM-0-0	Cathode	6.3	0.9				Characteristics Same as Type 6L6G.									
6AL7GT	GT	Electron Ray	8CH-0-0	Cathode	6.3	0.15				315 $\frac{1}{2}$	(Grid Voltage for Fluorescent C.O. = -6 (App.). Deflection Sens = 1.0 MM. Per Volt (App.).)								6AL7GT
6AM4	T-6 $\frac{1}{2}$	Triode	9BX	Cathode	6.3	0.225		4.6	1.6	200	100 $\frac{1}{2}$	10			8,700 $\frac{1}{2}$	9,800	85		6AM4
6AM5	Miniature	Pentode	6CH-0-0	Cathode	6.3	0.2				250	13.5	16			130,000	2,600	16,000	1,400	6AM5
6AM6	Miniature	Pentode	7DB-0-6	Cathode	6.3	0.3	0.01	10.0	3.25	250	2	250	10		1 Meg. $\frac{1}{2}$	7,500			6AM6
6AM8	T-6 $\frac{1}{2}$	Diode Pent.	9CY	Cathode	6.3	0.45	0.01	6.0	3.4	200	120 $\frac{1}{2}$	11.5			10.6 Meg.	7,000			6AM8
										Diode Plate Voltage 10 Volts for 50 Ma. Current. (Test Condition Only.)									
6AN4	T-5 $\frac{1}{2}$	Triode	7DK	Cathode	6.3	0.225	1.7*	2.9	0.25	200	100 $\frac{1}{2}$	13			7,000	10,000	70		6AN4
6AN5	Miniature	Pentode	7BD-0-0	Cathode	6.3	0.45	.075	9.0	4.8	120	6.0	35.0			12,500 $\frac{1}{2}$	8,000			6AN5
6AN6	Miniature	Quadriple Di.	7BJ-0-0	Cathode	6.3	0.20				75 Volts RMS Per Plate, 8 Ma. D-C Output Per Plate.									
6AN7	T-6 $\frac{1}{2}$	Tri. Hexode	9Q-0-3	Cathode	6.3	0.23	0.1	3.8	9.2	250	250	3.0			100,000	750 $\frac{1}{2}$	19		6AN7
										Applied through 33,000 Ohms. Grid Res. = 99,000 Ohms, Ib = 5.1 Ma.									
										Applied through 33,000 Ohms. Grid Res. = 47,000 Ohms, Ib = 4.8 Ma.									
6AN8	T-6 $\frac{1}{2}$	Tri. Pentode	9DA	Cathode	6.3	0.45	1.5*	2.0*	0.97*	200	6.0	13.0			5,750 $\frac{1}{2}$	3,300			6AN8
										200	180 $\frac{1}{2}$	9.5			0.3 Meg. m	6,200			
6AQ5	Miniature	Beam Amp.	7BZ-0-0	Cathode	6.3	0.45	0.35	7.6	6.0	250	12.5	250	45		52,000	4,100	5,000	4,500	6AQ5
										180	8.5	180	29		58,000	3,700	5,500	2,000	
6AQ6	Miniature	Duodiode Tri.	7BT-0-0	Cathode	6.3	0.15	1.8	1.7	1.5	100	1.0	0.8			61,000	1,150	70		6AQ6
										250	3.0	1.0			58,000	1,200	70		
6AQ7GT	GT	Duodiode Tri.	8CK-0-0	Cathode	6.3	0.30	2.8	2.3*	1.5*	250	2.0	2.3			44,000	1,600	70		6AQ7GT
6AR5	Miniature	Pentode	6CC-0-0	Cathode	6.3	0.40				250	16.5	250	34		65,000	2,400	7,000	3.2	6AR5
										250	18.0	250	32		68,000	2,300	7,600	3.4	

# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction		Emitter			Note (1) (?) Capacitances in $\mu\text{f.}$				Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type										
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout																						
6AR6	T-11	Pentode	6BQ-0-0	Cathode	6.3	1.20	0.55*	11.0*	7.0*	Power Amp.	250 36.0 200	22.5 36.0 19.5	250 300 .....	77 300 90	5.0 4.0	..... ..... .....	21,000 22,000 1,000	5,400 4,300 6,000	113 95 6	..... ..... .....	6AR6										
6AS5	Miniature	Beam Amp.	7CV-0-0	Cathode	6.3	0.8	0.6*	12.0*	6.2*	Power Amp.	150	8.5	110	35	2.0	.....	5,600	.....	.....	2,200	6AS5										
6AS6	Miniature	Pentode	7CM-0-0	Cathode	6.3	0.175	0.02	4.0	3.0	R-F Amp.	190	3.0	190	35	5.5	.....	3,500	.....	.....	.....	6AS6										
6AS7GT	GT	Duotriode	8BD-0-0	Cathode	6.3	2.5	.....	.....	.....	Power Amp.	135	Self	.....	195	.....	.....	7,000	.....	2	(Rk = 250 Ohms)	6AS7GT										
6AT6	Miniature	Duotriode Tri.	7BT-0-0	Cathode	6.3	0.30	2.1*	2.3*	1.1*	Det. Amp.	100 250	1.0 3.0	..... .....	..... 1.0	.....	.....	54,000 58,000	1,300 .....	70 70	..... .....	6AT6										
6AU4GT	T-9	Diode	4CG-0-0	Cathode	6.3	1.8	.....	.....	.....	T.V. Damper	P.I.V. = 4,500 Volts Abs. Max. D.C. Plate Current = 175 Ma. Max.											.....	.....	.....	6AU4GT						
6AU5GT	GT	Pentode	6CK-0-0	Cathode	6.3	1.25	0.5*	11.3*	7.0*	Horiz. Amp.	Maximum Peak Positive Pulse Plate Voltage = 5,000 Volts. Maximum D-C Plate Current = 100 Ma. Maximum Plate Dissipation = 10 Watts. Maximum Screen Dissipation = 2.5 Watts.											.....	.....	.....	6AU5GT						
6AU6	Miniature	Pentode	7BK-0-2	Cathode	6.3	0.30	.0035m	5.5*	5.0*	R-F Amp.	100 250 250	1.0 1.0 1.0	100 125 150	5.2 7.6 10.8	2.0 3.0 4.3	..... ..... .....	600,000 $\downarrow$ 2.5 Meg. $\downarrow$ 2.0 Meg. $\downarrow$	3,900 4,450 5,200	..... ..... .....	..... ..... .....	6AU6										
6AV5GT	GT	Pentode	6CK-0-0	Cathode	6.3	1.2	.....	.....	.....	Horiz. Amp.	Maximum Peak Positive Pulse Plate Voltage = 5,000 Volts. Maximum D-C Plate Current = 100 Ma. Maximum Plate Dissipation = 11 Watts. Maximum Screen Dissipation = 2.5 Watts.											.....	.....	.....	.....	6AV5GT					
											250	22.5	150	55	2.1												.....	.....	.....	.....	
											* Applied through 250,000 ohms. $\square$ Pentode Operation. $\blacktriangle$ Triode Operation. $\#$ Plate and Target Supply Voltage. $\dagger$ Approximate.																m maximum ■ Cathode Resistor				
(1) Values are given shielded unless marked with (*).											(3) Has special mechanical and/or life characteristics.																				
(2) Converter tube capacitances given are signal grid to plate; RF input, Mixer Output.											With Average Power Input of 350 Mw. Grid to Grid, Per Tube or Section.																				
											For two tubes with 40 volts RMS applied to each grid.																				

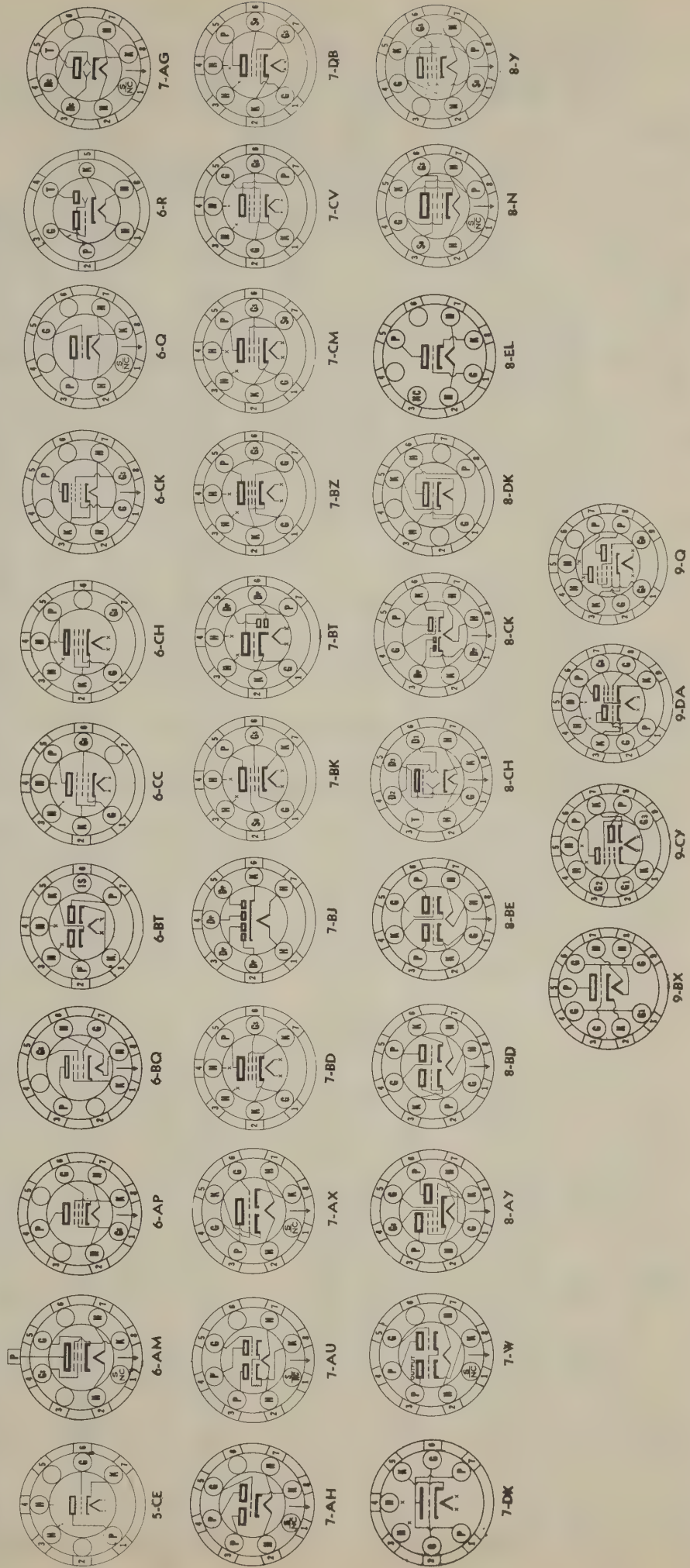
(1) Values are given shielded unless marked with (\*).  
 (2) Converter tube capacitances given are signal grid to plate, RF input, Mixer Output.

(3) Has special mechanical and/or life characteristics.  
 With Average Power Input of 390 Mw. Grid to Grid.  
 For two tubes with 40 volts RMS applied to each grid.

\* Applied through 250,000 ohms.  
 † Per Tube or Section.  
 ‡ Plate and Target Supply Voltage.

□ Conversion Transconductance.  
 \*\* Triode Operation.

▢ maximum  
 ▣ Cathode Resistor



SYMBOLS FOR BASE DIAGRAMS: A—Anode; A1—Anode 1; A2—Anode 2; D1—Deflector 1; D2—Deflector 2; F—Filament; Fc—Filament Center; G—Control Grid; Gc—Anode Grid; Gm—Modulator Grid; Go—Oscillator Grid; Gq—Quadrature Grid; Gs—Screen Grid; H—Heater; Hc—Heater Center; Ht—Heater Tap; IC—Internal Connection; J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode; Su—Suppressor Grid; T—Target; XS—External Shield; □ —Top Cap; —→—Locating Pin.

# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (?) Capacitances in $\mu\mu\text{f}$ .				Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type
	Bulb Size or Style	Construction		Type	Emitter		Note (1) (?) Capacitances in $\mu\mu\text{f}$ .															
		Class	Basing Diag.		Volts	Amps.	Csp.	Cin.	Cout													
6AV6	Miniature	Duodiode Tri.	7BT-0-0	Cathode	6.3	0.30	2.1	2.3	0.9	Det. Amp.	250 100	2.0 1.0	0	1.2 0.5	.....	.....	62,500 80,000	1,600 1,250	100 100	.....	.....	6AV6
6AW7GT	GT	Duodiode Tri.	8CQ-1-0	Cathode	6.3	0.3	.....	.....	.....	Det. Amp.	100	0	1.4	.....	.....	.....	1,200	1,900	80	.....	6AW7GT	
6AX4GT	T-9	Diode	4CG	Cathode	6.3	1.2	.....	.....	.....	T.V. Damper	350 A.C. Volts Per Plate, R.M.S., 125 Ma. D.C. Output. Condenser Input to Filter.	.....	.....	.....	.....	.....	.....	.....	.....	.....	6AX4GT	
6AX5GT	GT	Duodiode	6S-0-0	Cathode	6.3	1.2	.....	.....	.....	F-W Rect.	350 A.C. Volts Per Plate, R.M.S., 250 Ma. D.C. Output. Choke Input to Filter.	.....	.....	.....	.....	.....	.....	.....	.....	.....	6AX5GT	
6AX6G	ST-14	Duodiode	7Q-0-0	Cathode	6.3	2.5	.....	.....	.....	F-W Rect.	350 A.C. Volts Per Plate, R.M.S., 250 Ma. Output. Condenser Input to Filter.	.....	.....	.....	.....	.....	.....	.....	.....	.....	6AX6G	
6B4G	ST-16	Triode	5S-0-0	Filament	6.3	1.00	16.0	7.0	5.0	Power Amp.	Characteristics Same as Type 6A3.	.....	.....	.....	.....	.....	.....	.....	.....	.....	6B4G	
6B5	ST-14	Duodiode	6AS-0-0	Cathode	6.3	0.80	1.7	1.7	3.8	Power Amp.	Characteristics Same as Type 6N6G.	950	2.0	0.9	.....	.....	91,000	1,100	100	.....	6B5	
6B6G	ST-12	Duodiode Tri.	7V-0-0	Cathode	6.3	0.30	.....	.....	.....	Power Amp.	Characteristics Same as Type 6A3.	100	3.0	5.8	.....	.....	300,000	950	.....	.....	6B6G	
6B7	ST-12	Duodi. Pent.	7D-0-6	Cathode	6.3	0.30	.007	3.5*	9.5	R-F or I-F Det. Amp.	180 250	3.0 3.0	75.0 100	3.4 6.0	.....	.....	1 Meg. 840	.....	.....	.....	6B7	
6B7S	ST-12	Duodi. Pent.	7D-6-6	Cathode	6.3	0.30	.....	.....	.....	A-F Amp.	250	4.5	50.0	0.65	.....	.....	800,000	1,000	.....	.....	6B7S	
6B8	Metal	Duodi. Pent.	8E-1-1	Cathode	6.3	0.30	.005m	6.0	9.0	Det. Amp.	Characteristics Same as Type 6B7.	.....	.....	.....	.....	.....	.....	.....	.....	.....	6B8	
6B8G	ST-12	Duodi. Pent.	8E-0-8	Cathode	6.3	0.30	.01m	3.6	9.5	Det. Amp.	Characteristics Same as Type 6B7.	.....	.....	.....	.....	.....	.....	.....	.....	.....	6B8G	
6B8GT	GT	.....	8E-1-8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6B8GT	
6BA5	T-3	Pentode	8DY-0-0	Cathode	6.3	0.15	.005	3.4	3.6	A-F Amp.	100	Self	100	5.5	2.0	.....	175,000	2,150	.....	(Rk = 270 Ohms)	6BA5	
6BA6	Miniature	Pentode	7BK-0-2	Cathode	6.3	0.30	.0035m*	5.5*	5.0*	R-F Amp.	100 250	Self Self	100 100	10.8 11.0	4.4 4.2	.....	250,000 1.5 Meg.†	4,300 4,400	.....	(Rk = 68 Ohms)	6BA6	
6BA7	T-6½	Heptode	8CT-0-6&8	Cathode	6.3	0.3	.19m	9.5	8.3	Converter	100 250	1.0 1.0	100 100	3.6 3.8	10.2 10.0	.....	500,000 1 Meg.	900A	.....	.....	6BA7	
6BC5	Miniature	Pentode	7BD-0-2&7	Cathode	6.3	0.30	0.02	6.6	3.1	Tri. Amp.	250	Self	.....	6.0	.....	9,000	4,400	40	(Rk = 820 Ohms)	6BC5		
6BC7	T-6½	Triode	9AX-0-3	Cathode	6.3	0.45	.....	.....	.....	Pent. Amp.	180 100 125	Self Self Self	..... 100 195	..... 4.7 8.0	.....	6,000 4,900 5,100	.....	42	(Rk = 330 Ohms) (Rk = 180 Ohms) (Rk = 100 Ohms)	6BC7		
6BD4	T-12	Beam Triode	8FU	Cathode	6.3	0.6	1.0*	3.8*	0.04m*	F. M. Det.	20,000 Max. D.C. Plate Volts, 125 Max. D.C. Grid Volts, 1.5 Ma. Max. D.C. Plate Current.	.....	.....	.....	.....	.....	.....	.....	.....	6BD4		
6BD5GT	GT	Beam Amp.	6CK-0-0	Cathode	6.3	0.90	.....	.....	.....	Hi Volt. Reg.	Maximum Peak Positive Pulse Plate Voltage = 4,000 Volts, Maximum D-C Cathode Current = 100 Ma. Maximum Plate Dissipation = 10 Watts, Maximum Screen Dissipation = 3.0 Watts.	.....	.....	.....	.....	.....	.....	.....	.....	6BD5GT		
6BD6	Miniature	Pentode	7BK-0-2	Cathode	6.3	0.30	0.004	4.3	5.0	R-F Amp.	250 100	3.0 1.0	100 100	9.0 13	3.5 5.0	.....	700,000 120,000	2,000 2,350	.....	.....	6BD6	
6BD7	T-6½	Duodiode Tri.	9Z-0-7	Cathode	6.3	0.23	1.3	2.4	1.3	Det. Amp.	250	3	.....	1.0	.....	58,000	1,200	70	.....	.....	6BD7	
6BE6	Miniature	Heptode	7CH-0-0	Cathode	6.3	0.30	0.30m*	7.2*	8.6*	Converter	100 250	1.5 1.5	100 100	9.8 3.0	7.3 7.1	.....	500,000 1.0 Meg.†	455A 475A	(Osc. Grid Res. = 30,000 Ohms) (Osc. Grid Current 0.5 Ma.)	.....	6BE6	
6BF5	Miniature	Pentode	7BZ-0-0	Cathode	6.3	1.2	7.5*	7.0*	6.0*	Tri. Amp.	225	Self	.....	20	.....	4,200	6.7	(Rk = 1,200 Ohms)	.....	6BF5		
6BF6	Miniature	Duodiode Tri.	7BT-0-0	Cathode	6.3	0.30	2.0	1.8	1.4	Det. Amp.	250	9.0	.....	9.5	.....	8,500	1,900	16	(Rk = 10,000)	300	6BF6	
6BF7	T-3	Duodiode	8DG-0-0	Cathode	6.3	0.30	1.5	2.0	1.6	R-F Amp. #	100	Self	.....	8.0	.....	7,000	4,800	35	(Rk = 100 Ohms)	.....	6BF7	
6BF7A	T-3	Duodiode	8DG-0-0	Cathode	6.3	0.3	1.5	2.0	2.0	R-F Amp. #	100	Self	.....	8.0	.....	7,000	4,800	35	(Rk = 100 Ohms)	.....	6BF7A	
6BG6G	ST-16	Beam Amp.	5BT-0-0	Cathode	6.3	0.90	0.5m*†	11.0*	6.5*	R-F Amp.	Maximum Peak Positive Pulse Plate Voltage = 6,600 Volts, Maximum D.C. Cathode Current = 110 Ma. Maximum Plate Dissipation = 20 Watts, Maximum Screen Dissipation = 3.2 Watts.	.....	.....	.....	.....	.....	.....	.....	.....	.....	6BG6G	
6BG7	T-3	Duodiode	8DG-0-0	Cathode	6.3	0.30	1.5	2.0	1.6	R-F Amp. #	100	Self	.....	8.0	.....	7,000	4,800	35	(Rk = 100 Ohms)	.....	6BG7	
6BH6	Miniature	Pentode	7CM-0-7	Cathode	6.3	0.15	0.0035m*	5.4*	4.4*	R-F Amp.	100 250	1.0 1.0	100 150	3.6 7.4	1.4 2.9	.....	0.7 Meg.† 1.4 Meg.†	3,400 4,600	.....	.....	6BH6	
6BJ5	T-5½	Pentode	6CH	Cathode	6.3	0.64	.....	.....	.....	Power Amp.	250	5.0	250	3.5	5.5	.....	40,000	10,500	450	7,000	4,000	6BJ5
6BJ6	Miniature	Pentode	7CM-0-7	Cathode	6.3	0.15	.0035m*	4.5*	5.0*	R-F Amp.	250 100	1.0 1.0	100 100	9.2 9.0	3.3 3.5	.....	1.3 Meg. 250,000	3,600 3,650	.....	.....	6BJ6	
6BJ7	T-6½	Triode	9AX-0-3	Cathode	6.3	0.45	.....	.....	.....	TV DC Res't†	Each Section Similar to Each Section of a 6AL5.	.....	.....	.....	.....	.....	.....	.....	.....	.....	6BJ7	
6BK5	T-6½	Beam Amp.	9BQ	Cathode	6.3	1.2	0.6	13	5.0	Power Amp.	250	5.0	250	35	3.5	.....	8,500	.....	.....	6,500	3,500	6BK5
6BK6	Miniature	Duodiode Tri.	7BT-0-2	Cathode	6.3	0.30	.....	.....	.....	Det. Amp.	100 250	1.0 2.0	.....	0.5 1.2	.....	80,000 62,500	1,250 1,600	100 100	.....	.....	6BK6	
6BK7	T-6½	Duodiode	9AJ-0-9	Cathode	6.3	0.45	1.9	3.0	1.1	VHF Amp.	100	120m	.....	9.0	.....	6,100	6,100	37	.....	.....	6BK7	
6BK7A	T-6½	Duodiode	9AJ-0-9	Cathode	6.3	0.45	1.8	3.0	1.0	VHF Amp.	150	56m	.....	18	.....	4,700	8,500	40	.....	.....	6BK7A	
6BL7GT	GT	Duodiode	8BD-0-0	Cathode	6.3	1.5	4.2	5.0	3.4	Vert. Amp. #	Maximum Peak Positive Pulse Plate Voltage = 2,000 Volts, Maximum D-C Cathode Current = 60 Ma. Maximum Plate Dissipation = 10 Watts (12 Watts Total).	.....	.....	.....	.....	.....	.....	.....	.....	.....	6BL7GT	
6BN6	Miniature	Pentode	7DE-0-1	Cathode	6.3	0.3	.....	.....	.....	Limit Discrim.	65.	1.3	60	0.23	5.	.....	.....	.....	.....	.....	6BN6	
6BN7	T-6½	Duodiode	9AJ-0-0	Cathode	6.3	0.75	0.7	1.4	0.3	Oscillator Amplifier	190 250	1.0 1.0	.....	5.0 94.	.....	14,000 2,900	9,000 5,500	28 12	.....	.....	6BN7	
6BQ6G	ST-12	Beam Amp.	6AM-0-0	Cathode	6.3	1.2	0.6*	15.0*	7.5*	Horiz. Amp.	250	22.5	150	55	2.1	.....	20,000	5,500	.....	.....	6BQ6G	
6BQ6GA	T-11	Beam Amp.	6AM-0-0	Cathode	6.3	1.2	0.6*	15.0*	7.5*	Horiz. Amp.	6,000 Peak Pos. Plate Volts, 110 Ma. Max. Cathode Current, 11 Watts Max. Plate Diss., 2.5 Watts Max. Screen Diss.	.....	.....	.....	.....	.....	.....	.....	.....	.....	6BQ6GA	
6BQ6GT	T-9	Beam Amp.	6AM-0-0	Cathode	6.3	1.2	0.6*	15.0*	7.5*	Horiz. Amp.	Characteristics Same as Type 6BQ6G.	.....	.....	.....	.....	.....	.....	.....	.....	.....	6BQ6GT	
6BQ6GTA	T-9	Beam Amp.	6AM-0-0	Cathode	6.3	1.2	0.6*	15.0*	7.5*	Horiz. Amp.	Characteristics Same as Type 6BQ6G.	.....	.....	.....	.....	.....	.....	.....	.....	.....	6BQ6GTA	

# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction		Emitter			Note (1) (?) Capacitances in $\mu\mu\text{f}$ .		Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Rated Power Output	Undistorted Power Output Milliwatts	Type		
	Bulb Size or Style	Class	Base Diag.	Type	Volts	Amps.	Cgp.													Cin.	Cout
68Q7	T-6½	Duotriode	9AJ-0-9	Cathode	6.3	0.40	1.15	2.55	1.30	Amplifier	150	Self	.....	5,800	6,000	35	(Rk = 220 Ohms)	68Q7			
68Q7A	T-6½	Duotriode	9AJ	Cathode	6.3	0.4	1.15	2.85	1.35	VHF Amp.	150	220 <sup>a</sup>	.....	6,100	6,400	39	.....	68Q7A			
68T6	Miniature	Duotriode Tri.	7BT-0-2	Cathode	6.3	0.30	.....	.....	.....	Det. Amp.	100	1.0	.....	54,000	1,300	70	.....	68T6			
68U6	Miniature	Duotriode Tri.	7BT-0-2	Cathode	6.3	0.30	.....	.....	.....	Det. Amp.	100	3.0	.....	11,000	1,500	16.5	.....	68U6			
68X7GT	T-9	Duotriode	8BD	Cathode	6.3	1.5	4.2	4.4	1.1	Vert. Amp.	250	9.5	.....	8,500	1,900	16.0	10,000	300	68X7GT		
68Y5G	ST-14	Duotriode	6CN-0-0	Cathode	6.3	1.6	.....	.....	.....	F-W Rect.	375 A.C. Volts Per Plate, R.M.S., 175 Ma. D.C. Output Current. Condenser Input to Filter.	42	.....	1,300	7,600	10	.....	.....	68Y5G		
68Y5GA	T-12	Duotriode	6CN-0-0	Cathode	6.3	1.6	.....	.....	.....	T.V. Dumper	P.I.V. = 3,000 Volts Abs. Max. D.C. Plate Current = 175 Ma. Max. Each Plate.	.....	.....	.....	.....	.....	.....	.....	68Y5GA		
68Y6	T-5½	Heptode	7CH-0-0	Cathode	6.3	0.3	0.08m*	5.4*	7.6*	Sync. Separator	10	#1&2=0	25	1.4	3.5	Plate Current = 50 $\mu$ Amps. When Grid 3 Voltage = 2.5	.....	.....	68Y6		
68Z6	T-5½	Pentode	7CM-0-7	Cathode	6.3	0.3	.015m	7.5	9.8	R-F Amp.	200	180 <sup>a</sup>	150	11.0	2.6	0.6 Meg. $\uparrow$	.....	.....	68Z6		
68Z7	T-6½	Duotriode	9AJ	Cathode	6.3	0.4	1.15	2.5	0.15	VHF Amp.	150	220 <sup>a</sup>	.....	10	6,900	38	Semi-Remote Cutoff.	68Z7			
6C4	Miniature	Triode	6BG-0-0	Cathode	6.3	0.15	1.4	1.8	2.5	R-F Osc.	300	27	.....	25	.....	.....	Class C	6C4			
										R-F Amp.	250	8.5	.....	10.5	.....	17	.....	.....			
											100	0	.....	11.8	.....	19.5	.....	.....			
6C5	Metal	Triode	6Q-1-1	Cathode	6.3	0.30	2.0	3.0	11.0	Amplifier	Characteristics Same as Type 6C5GT, Except Capacitances.										6C5
6C5GT	GT	Triode	6Q-1-1	Cathode	6.3	0.30	2.2	4.8	12.0	Amplifier	250	8.0	.....	8.0	2,000	20	.....	.....	6C5GT		
6C6	ST-12	Pentode	6F-0-5	Cathode	6.3	0.30	.007m	5.0*	6.5*	Amplifier	100	3.0	100	2.0	0.5	1 Meg.	1,185	.....	6C6		
											250	3.0	100	2.0	0.5	1 Meg. +	1,225	.....			
6C7	ST-12	Duotriode Tri.	7G-3-6	Cathode	6.3	0.30	.....	.....	.....	Det. Amp.	250	9.0	.....	4.5	16,000	1,250	20	.....	6C7		
6C8G	ST-12	Duotriode	8G-0-0	Cathode	6.3	0.30	2.6	2.6	2.0	Amplifier	250	4.5	.....	3.2	22,500	1,600	36	(One Section)	6C8G		
							1.8	1.3	2.2	Inverter	250	3.0	Plate Load 100,000 Ohms, Self-Bias Resistor 1,500 Ohms, Voltage Amplification 48. Output Volts 80, RMS for Inverter Service.					.....	.....		

(1) Values are given shielded unless marked with (\*).

(2) Converter tube capacitances given are signal grid to plate; RF input, Mixer Output.

(3) Has special mechanical and/or life characteristics.

38 With Average Power Input of 350 Mw. Grid to Grid.

†† For two tubes with 40 volts RMS applied to each grid.

\* Applied through 250,000 ohms.

† Per Tube or Section.

‡ Plate and Target Supply Voltage.

□ Pentode Operation.

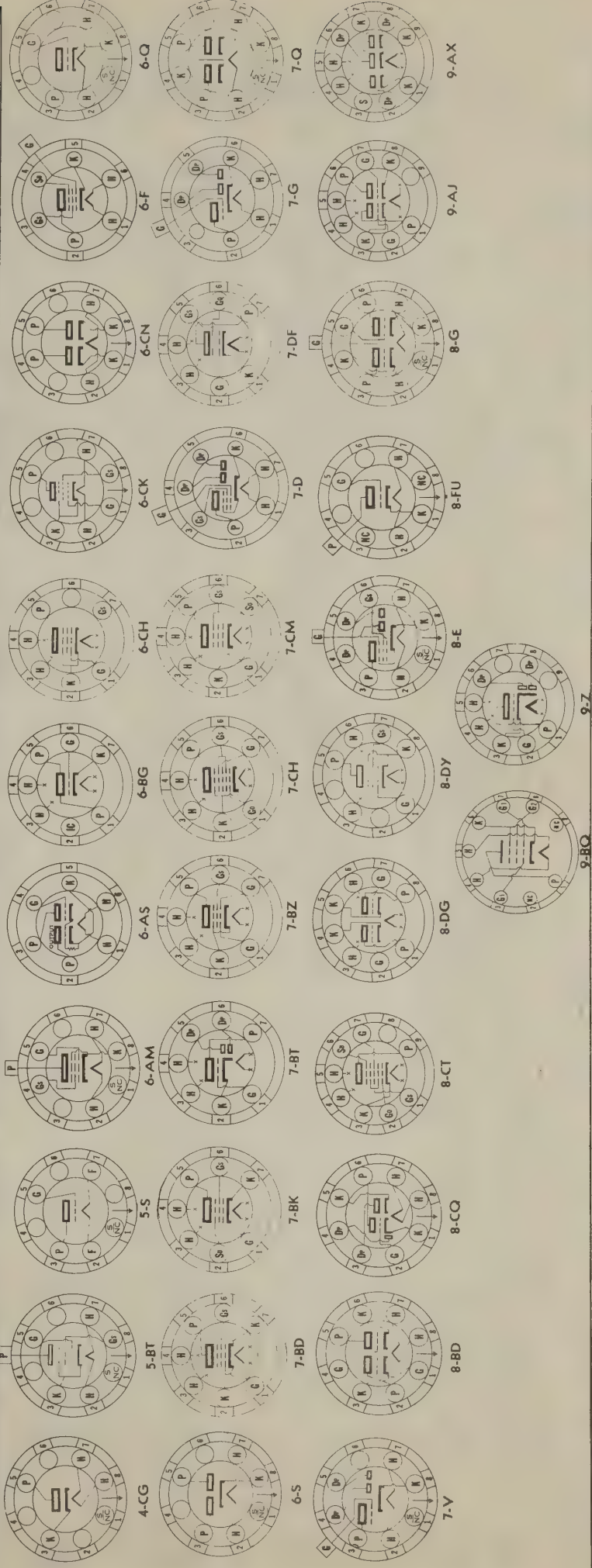
△ Conversion Transconductance.

•• Triode Operation.

m maximum

a Cathode Resistor

Approximate.



SYMBOLS FOR BASE DIAGRAMS:

A—Anode; A1—Anode 1; A2—Anode 2; D1—Deflector 1; D2—Deflector 2; F—Filament; Fc—Filament Center; G—Control Grid; Gc—Anode Grid; Go—Oscillator Grid; Gq—Quadrature Grid; Gs—Screen Grid; H—Heater; Hc—Heater Center; Ht—Heater Tap; IC—Internal Connection; J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode; Su—Suppressor Grid; T—Target; XS—External Shield; □—Top Cap; —>—Locating Pin.

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# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction		Emitter		Note (1) Capacitances in $\mu\mu\text{f}$ .			Use	Plate Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Staked Power Output	Undistorted Power Output Milli-watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout									
6CB6	Miniature	Pentode	7CM-0-7	Cathode	6.3	0.30	0.03m	6.3	1.9	150	9.5	2.8	600,000 $\pm$	6,200	.....	(Rk = 180 Ohms)	6CB6	
6CD6G	ST-16	Pentode	5BT-0-0	Cathode	6.3	2.5	0.6	25.0*	9.5*	Maximum Peak Positive Plate Voltage = 6,600 Volts, Maximum D.C. Plate Current = 200 Ma. Maximum Plate Dissipation = 15 Watts, Maximum Screen Dissipation = 3 Watts.	.....	.....	.....	.....	.....	.....	6CD6G	
6CF6	T-5½	Pentode	7CM	Cathode	6.3	0.3	.020*	6.3*	1.9*	.....	.....	.....	.....	.....	.....	.....	6CF6	
6CG6	Miniature	Pentode	7BK-0-2	Cathode	6.3	0.30	.008m	5.0	5.0	.....	.....	.....	.....	.....	.....	.....	6CG6	
6CL6	T-6½	Pentode	9BV	Cathode	6.3	0.65	0.12	11	5.5	.....	.....	.....	.....	.....	.....	.....	6CL6	
6CM6	T-6½	Beam Pentode	9CK	Cathode	6.3	0.45	0.7	8.0	8.5	.....	.....	.....	.....	.....	.....	.....	6CM6	
6CR6	T-5½	Diode Pent.	7EA	Cathode	6.3	0.3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6CR6	
6CS6	T-5½	Heptode	7CH	Cathode	6.3	0.3	0.05*	5.5*	7.5*	.....	.....	.....	.....	.....	.....	.....	6CS6	
6CU6	T-12	Beam Amp.	6AM-0-0	Cathode	6.3	1.2	0.35*	15.0*	7.0*	.....	.....	.....	.....	.....	.....	.....	6CU6	
6D4	Miniature	Gas Triode	5AY-0-0	Cathode	6.3	0.25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6D4	
6D6	ST-12	Pentode	6F-0-5	Cathode	6.3	0.30	.007m	4.7*	6.5*	.....	.....	.....	.....	.....	.....	.....	6D6	
6D7	ST-12	Pentode	7H-5-6	Cathode	6.3	0.30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6D7	
6D8G	ST-12	Heptode	8A-0-0	Cathode	6.3	0.15	0.2	8.0	11.0	.....	.....	.....	.....	.....	.....	.....	6D8G	
6D86	T-5½	Pentode	7CM-0-2	Cathode	6.3	0.3	.0033*	6.0*	5.0*	.....	.....	.....	.....	.....	.....	.....	6D86	
6DC6	T-5½	Pentode	7CM-0-7	Cathode	6.3	0.3	0.09*	6.5*	2.0*	.....	.....	.....	.....	.....	.....	.....	6DC6	
6E5	T-9	Electron Ray	6R-0-0	Cathode	6.3	0.30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6E5	
6E6	ST-14	Duotriode	7B-0-0	Cathode	6.3	0.60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6E6	
6E7	ST-12	Pentode	7H-5-6	Cathode	6.3	0.30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6E7	
6F4	Atom	Triode	7BR-0-0	Cathode	6.3	0.925	1.9*	2.0*	0.6*	.....	.....	.....	.....	.....	.....	.....	6F4	
6F5	Metal	Triode	5M-1-0	Cathode	6.3	0.30	2.3	5.5	4.0	.....	.....	.....	.....	.....	.....	.....	6F5	
6F5GT	GT	Triode	5M-0-0	Cathode	6.3	0.30	2.8*	9.9*	3.2*	.....	.....	.....	.....	.....	.....	.....	6F5GT	
6F6	Metal	Pentode	7S-1-0	Cathode	6.3	0.70	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6F6	
6F6G/GT	ST-14 GT	Pentode	7S-0-0	Cathode	6.3	0.30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6F6G/GT	
6F7	ST-12	Pent. Triode	7E-0-6	Cathode	6.3	0.30	.008m	3.2	12.5	.....	.....	.....	.....	.....	.....	.....	6F7	
6F7S	ST-12	Pent. Triode	7E-6-6	Cathode	6.3	0.30	2.0*	9.5*	3.0*	.....	.....	.....	.....	.....	.....	.....	6F7S	
6F8G	ST-12	Duotriode	8G-0-0	Cathode	6.3	0.60	3.8*	3.2*	1.0*	.....	.....	.....	.....	.....	.....	.....	6F8G	
6G5	Now Known as Type 6U5	Pentode	7S-0-0	Cathode	6.3	0.15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6G5	
6G6G	ST-12	Pentode	7S-0-0	Cathode	6.3	0.15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6G6G	
6H4GT	GT	Diode	5AF-0-0	Cathode	6.3	0.15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6H4GT	
6H6, 6H6GT	GT, Metal	Duotriode	7Q-0-1	Cathode	6.3	0.30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6H6, 6H6GT	
6J4	Miniature	Triode	7BQ-0-0	Cathode	6.3	0.40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6J4	
6J5	Metal	Triode	6Q-1-0	Cathode	6.3	0.30	3.4	4.4	3.6	.....	.....	.....	.....	.....	.....	.....	6J5	
6J5GT	GT	Triode	6Q-1-0	Cathode	6.3	0.30	3.8	4.2	5.0	.....	.....	.....	.....	.....	.....	.....	6J5GT	
6J6	Miniature	Duotriode	7BF-0-0	Cathode	6.3	0.45	1.4	2.3	1.6	.....	.....	.....	.....	.....	.....	.....	6J6	
6J7	Metal	Pentode	7R-1-1	Cathode	6.3	0.30	.005m	7.0	12.0	.....	.....	.....	.....	.....	.....	.....	6J7	
6J7G	ST-12	Pentode	7R-0-1	Cathode	6.3	0.30	.007m	5.4	12.0	.....	.....	.....	.....	.....	.....	.....	6J7G	
6J8G	ST-12	Tri. Heptode	8H-0-8	Cathode	6.3	0.30	.02m	4.4	10.0	.....	.....	.....	.....	.....	.....	.....	6J8G	
6K4	T-3	Triode	6K4	Cathode	6.3	0.15	2.2*	2.4*	0.85*	.....	.....	.....	.....	.....	.....	.....	6K4	
6K5G	ST-12	Triode	5U-0-0	Cathode	6.3	0.30	2.0	2.9	5.75	.....	.....	.....	.....	.....	.....	.....	6K5G	
6K5GT	GT	Triode	5U-0-0	Cathode	6.3	0.30	2.8	2.9	4.7	.....	.....	.....	.....	.....	.....	.....	6K5GT	
6K6GT	GT	Pentode	7S-0-0	Cathode	6.3	0.40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6K6GT	
6K7	Metal	Pentode	7R-1-0	Cathode	6.3	0.30	.005m	7.0	12.0	.....	.....	.....	.....	.....	.....	.....	6K7	
6K7G	ST-12	Pentode	7R-0-8	Cathode	6.3	0.30	.007m	5.0	12.0	.....	.....	.....	.....	.....	.....	.....	6K7G	
6K7GT	GT	Pentode	7R-1-8	Cathode	6.3	0.30	.005m	4.6	12.0	.....	.....	.....	.....	.....	.....	.....	6K7GT	
6K8	Metal	Tri. Hexode	8K-1-0	Cathode	6.3	0.30	.03m	6.6	3.5	.....	.....	.....	.....	.....	.....	.....	6K8	
6K8G	ST-12	Tri. Hexode	8K-0-8	Cathode	6.3	0.30	.08m	4.6	4.8	.....	.....	.....	.....	.....	.....	.....	6K8G	
6K8GT	GT	Tri. Hexode	8K-1-8	Cathode	6.3	0.30	.08m	5.0	4.3	.....	.....	.....	.....	.....	.....	.....	6K8GT	

# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction		Emitter		Note (1) (2) Capacities in $\mu\mu\text{f}$ .				Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.												
6L4	Acom	Triode	7BR-0-0	Cathode	6.3	0.925	1.6*	1.8*	0.5*	Osc. Amp.	80	Self	9.5	.....	4,400	6,400	28	( $R_k = 150 \text{ Ohms}$ )	6L4	
6L5G	ST-12	Triode	6Q-0-0	Cathode	6.3	0.15	2.8	2.8	5.0	Amplifier	100 250	3.0 9.0	4.0 8.0	.....	10,000 9,000	1,500 1,900	15 17	.....	6L5G	
6L6	Metal	Beam Amp.	7S-1-0	Cathode	6.3	0.90	0.9*	11.5*	9.5*	Power Amp.	950	14.0	72.0	5.0	92,500	6,000	.....	2,500	6L6	
6L6G	ST-16		7S-0-0							P.P.A.1 Amp.	350	18.0	95.0	2.5	33,000	5,200	.....	4,200	6L6G	
6L6GA	ST-14		7S-0-0							P.P.A.B1 Amp.	970	17.5	95.0	11.0	23,500	5,700	.....	17,500	6L6GA	
6L6GB	T-12		7S-0-0							P.P.A.B2 Amp.	360	22.5	270	5.0	(Current & Output for Two Tubes)	(Current & Output for Two Tubes)	.....	26,500	6L6GB	
6L7	Metal	Heptode	7T-1-1	Cathode	6.3	0.30	.001m	7.5	11.0	Mixer	360	22.5	88.0	5.0	.....	.....	.....	3,800	47,000	6L7
6L7G	ST-12	Heptode	7T-0-8	Cathode	6.3	0.30	.005m	6.0	10.0	Amplifier Mixer Amp.	950 250	6.0 3.0	3.3 5.3	9.2 6.5	1 Meg. + 600,080	350 $\Delta$ 1,100	( $G_3 = \text{Neg. 15 Volts}$ ) ( $G_3 = \text{Neg. 3.0 Volts}$ )	.....	6L7G	
6M5	T-6½	Pentode	9N-0-0	Cathode	6.3	0.71	1.0m	10.0	6.2	Power Amp.	250	Self	36	5.2	40,000	10,000 ( $R_k = 170 \text{ Ohms}$ )	7,000	3,900	6M5	
6N4	Miniature	Triode	7CA-0-0	Cathode	6.3	0.90	1.1	3.0	1.6	Amplifier	180	3.5	12.0	.....	5,400 $\Delta$	6,000 $\Delta$	32	.....	6N4	
6N6G	ST-14	Duotriode	7AU-0-0	Cathode	6.3	0.80	.....	.....	.....	Power Amp.	300	0.0	(Input Section) (Output Section)	8.0 45.0	5,400 $\Delta$	2,400	58	7,000	4,000	6N6G
6N7GT	GT Metal	Duotriode	8B-0-0	Cathode	6.3	0.80	.....	.....	.....	Power Amp. Driver	300 950	0.0 5.0	17.5 Per Plate, Class B Operation, Zero Signal .....	.....	24,000 $\Delta$ 11,300	2,400 3,100	.....	8,000 $\Delta$ (Class A Driver)	10,000	6N7GT
6N7										Driver	250	6.0	7.0	.....	11,300	3,100	35	(Class A Driver)	6N7	
6N8	T-6½	Duodi. Pent.	9T-0-0	Cathode	6.3	0.3	.002m	4.0	4.6	R-F Amp.	250	2	8.5	5	1.6 Meg.	2,200	.....	.....	6N8	

(1) Values are given shielded unless marked with (\*).

(2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output.

(3) Has special mechanical and/or life characteristics.  
§§ With Average Power Input of 320 Mw. Grid to Grid, Plate and Target Supply Voltage.  
†† For two tubes with 40 volts RMS applied to each grid.

□ Applied through 250,000 ohms.  
# Per Tube or Section.  
\* Plate and Target Supply Voltage.  
† Triode Operation.  
‡ Pentode Operation.  
§ Plate to Plate.  
¶ Approximate.

m maximum  
= Cathode Resistor

(1) Values are given shielded unless marked with (\*).

(2) Converter tube capacitances given are signal grid to plate;

RF Input, Mixer Output.

(3) Has special mechanical and/or life characteristics.

§ With Average Power Input of 350 Mw. Grid to Grid.

† For two tubes with 40 volts RMS applied to each grid.

\* Applied through 250,000 ohms.

$\Delta$  Conversion Transconductance.

\*\* Triode Operation.

† Pentode Operation.

$\Delta$  Plate to Plate.

$\Delta$  Approximate.

m maximum

■ Cathode Resistor



SYMBOLS FOR BASE DIAGRAMS:

A—Anode; A1—Anode 1; A2—Anode 2; D1—Deflector 1; D2—Deflector 2; P—Plate; S—Screen; G—Control Grid; G2—Anode Grid; G3—Modulator Grid; Go—Oscillator Grid; G4—Quadrature Grid; G5—Screen Grid; H—Heater; Hc—Heater Center; Ht—Heater Tip; IC—Internal Connection; J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Sinter Anode; Su—Suppressor Grid; T—Target; X5—External Shield; □—Locating Pin.

# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction		Emitter		Note (1) (2) Capacitances in $\mu\mu\text{f}$ .				Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transcon- ductance Micromhos	Ampli- fication Factor	Ohms Load for Stated Power Output	Undis- torted Power Output Milli- watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.												
6P5GT	GT	Triode	6Q-0-0	Cathode	6.3	0.30	2.6	3.4	5.5	Amplifier Detector	250 250	13.5 20.0 $\downarrow$	5.0 (Plate Current to be adjusted to 0.2 Ma. with no input signal)	9,500	1,450	13.8	.....	.....	.....	6P5GT
6P7G	ST-12	Pent. Triode	7U-0-8	Cathode	6.3	0.30	.007m 2.0	2.8 2.7	12.0 2.5	R-F Amp.	250	1.0	15	.....	12,000	80	.....	.....	.....	6P7G
6Q4	T-6½	Triode	95-0-0	Cathode	6.3	0.48	3.4	5.4	0.06m	R-F Amp.	250	1.0	.....	.....	.....	.....	.....	.....	.....	6Q4
6Q7	Metal	Duodiode Tri.	7V-1-8	Cathode	6.3	0.30	1.4	5.0	3.8	Det. Amp.	100	1.5	0.8	.....	58,000	1,900	70	.....	.....	6Q7
6Q7G	ST-12	Duodiode Tri.	7V-0-8	Cathode	6.3	0.30	1.5	3.2	5.0	Det. Amp.	250	3.0	1.1	.....	58,000	1,900	70	.....	.....	6Q7G
6Q7GT	GT	Duodiode Tri.	7V-1-8	Cathode	6.3	0.30	1.6	2.2	5.0	Oscillator	150	2	30	.....	5,500	16	.....	.....	.....	6Q7GT
6R4	T-6½	Triode	9R-0-0	Cathode	6.3	0.2	1.5	1.7	0.5	Oscillator	150	2	.....	.....	.....	.....	.....	.....	.....	6R4
6R6G	ST-12	Pentode	6AW-0-0	Cathode	6.3	0.3	.007m	4.5*	11.0*	R-F Amp.	250	3.0	7.0	1.7	800,000	1,450	1,160	.....	.....	6R6G
6R7	Metal	Duodiode Tri.	7V-1-1	Cathode	6.3	0.30	2.3	4.8	3.8	Det. Amp.	250	9.0	9.5	.....	8,500	1,900	16	.....	.....	6R7
6R7GT	GT	Duodiode Tri.	7V-0-8	Cathode	6.3	0.30	2.1	2.6	5.2	Det. Amp.	250	9	9.5	.....	8,500	1,900	16	.....	.....	6R7GT
6R8	T-6½	Triple Dio. Tri.	9E-0-3&8	Cathode	6.3	0.45	2.4	1.5*	1.1*	Det. Amp.	250	9	.....	.....	8,500	1,900	16	10,000	300	6R8
6S4	T-6½	Triode	9AC-0-0	Cathode	6.3	0.60	.....	.....	.....	Vert. Amp.	250	2.0	.....	.....	91,000	1,100	100	.....	.....	6S4
6S7	Metal	Pentode	7R-1-1	Cathode	6.3	0.15	.005m	6.5	10.5	R-F Amp.	135 250	3.0 3.0	67.5 100	3.7 8.5	1 Meg. 1 Meg.	1,250 1,750	375 1,100	.....	.....	6S7
6S7G	ST-12	Pentode	7R-0-8	Cathode	6.3	0.15	.008m	4.4	8.0	R-F Amp.	250	3.0	.....	.....	.....	.....	.....	.....	.....	6S7G
6S8GT	GT	Triple Dio. Tri.	8CB-0-2	Cathode	6.3	0.30	2.0	1.2	5.0	Det. Amp.	250	2.0	0.9	.....	91,000	1,100	100	.....	.....	6S8GT
6SA7	Metal	Heptode	8R-1-0	Cathode	6.3	0.30	.13m	9.5	12.0	Converter	100 250	2.0 2.0	3.3 3.5	8.5 8.5	500,000 $\downarrow$ 1.0 Meg. $\downarrow$	495 $\Delta$ 450 $\Delta$	.....	.....	.....	6SA7
6SA7GT	GT	Heptode	8AD-1-6	Cathode	6.3	0.30	.5m	11.0	11.0	Converter	100 250	2.0 2.0	.....	.....	.....	.....	.....	.....	.....	6SA7GT
6SB7Y	Metal	Heptode	8R-1-0	Cathode	6.3	0.30	0.13m	9.6	9.2	Converter	250	1.5	4.0	8.5	.....	.....	.....	.....	.....	6SB7Y
6SC7, 6SC7GT	Metal, GT	Duodiode	8S-1-0	Cathode	6.3	0.30	2.0	2.2	3.0	Amplifier	250	2.0	2.0	5.7	53,000	1,395	70	(Each Triode)	.....	6SC7, 6SC7GT
6SD7GT	GT	Pentode	8N-1-5	Cathode	6.3	0.30	.0035	9.0	7.5	R-F Amp.	100 250	2.0 2.0	100 100	6.0	250,000 $\downarrow$ 1.0 Meg. $\downarrow$	3,350 3,600	.....	.....	.....	6SD7GT
6SE7GT	GT	Pentode	8N-1-5	Cathode	6.3	0.3	.0035m	6.0	7.5	R-F Amp.	100 250	1.0 1.5	100 100	5.5 1.5	250,000 $\downarrow$ 1,000,000 $\downarrow$	3,100 3,400	.....	.....	.....	6SE7GT
6SF5	Metal	Triode	6AB-1-0	Cathode	6.3	0.30	2.4	4.0	3.6	Amplifier	250	2.0	0.9	.....	66,000	1,500	100	.....	.....	6SF5
6SF5GT	GT	Triode	6AB-0-0	Cathode	6.3	0.30	2.6	4.2	3.8	Amplifier	100 250	1.0 1.0	12 12.4	3.4 3.3	200,000 $\downarrow$ 700,000 $\downarrow$	1,975 2,050	.....	.....	.....	6SF5GT
6SF7	Metal	Diode Pent.	7AZ-1-1	Cathode	6.3	0.30	.004m	5.5	6.0	Det. Amp.	100 250	1.0 1.0	.....	.....	.....	.....	.....	.....	.....	6SF7
6SG7	Metal	Pentode	8BK-1-1	Cathode	6.3	0.30	.003m	8.5	7.0	R-F Amp.	100 250	1.0 2.5	8.2 11.8	3.2 4.4	250,000 $\downarrow$ 900,000 $\downarrow$	4,100 4,700	.....	.....	.....	6SG7
6SG7GT	GT	Pentode	8BK-1-1	Cathode	6.3	0.30	.004m	8.5	7.0	R-F Amp.	100 250	1.0 2.5	8.2 11.8	3.2 4.4	250,000 $\downarrow$ 900,000 $\downarrow$	4,100 4,700	.....	.....	.....	6SG7GT
6SH7	Metal	Pentode	8BK-1-1	Cathode	6.3	0.30	.003m	8.5	7.0	R-F Amp.	100 250	1.0 2.5	.....	.....	.....	.....	.....	.....	.....	6SH7
6SH7GT	GT	Pentode	8BK-1-1	Cathode	6.3	0.30	.004m	8.5	7.0	R-F Amp.	100 250	1.0 2.5	5.3 10.8	2.1 4.1	350,000 $\downarrow$ 900,000 $\downarrow$	4,000 4,900	.....	.....	.....	6SH7GT
6SJ7	Metal	Pentode	8N-1-1	Cathode	6.3	0.30	.005m	6.0	7.0	R-F Amp.	100 250	3.0 3.0	9.9 3.0	0.9 0.8	700,000 $\downarrow$ 1.5 Meg. $\downarrow$	1,575 1,650	.....	.....	.....	6SJ7
6SJ7GT	GT	Pentode	8N-1-5	Cathode	6.3	0.30	.005m	6.3	7.5	R-F Amp.	100 250	3.0 3.0	.....	.....	.....	.....	.....	.....	.....	6SJ7GT
6SK7	Metal	Pentode	8N-1-1	Cathode	6.3	0.30	.003m	6.0	7.0	R-F Amp.	100 250	1.0 3.0	.....	.....	.....	.....	.....	.....	.....	6SK7
6SK7GT	GT	Pentode	8N-1-5	Cathode	6.3	0.30	.005m	6.5	7.5	R-F Amp.	100 250	1.0 3.0	13.0 9.2	4.0 2.6	120,000 $\downarrow$ 800,000 $\downarrow$	2,350 2,000	.....	.....	.....	6SK7GT
6SL7GT	GT	Duodiode	8BD-0-0	Cathode	6.3	0.30	.....	.....	.....	Amplifier#	250	2.0	2.3	.....	44,000	1,600	70	.....	.....	6SL7GT
6SL7WGT (3)	GT	Duodiode	8BD-0-0	Cathode	6.3	0.30	.....	.....	.....	Amplifier	90 250	0 8	.....	.....	6,700 7,700	3,000 2,600	20 20	.....	.....	6SL7WGT (3)
6SN7GT	GT	Duodiode	8BD-0-0	Cathode	6.3	.600	3.8* 4.0*	2.8* 3.0*	0.8* 1.2*	Amplifier (per unit)	Same as 6SN7GT except for Higher Plate Voltage and Dissipation Ratings.	.....	.....	.....	.....	.....	.....	.....	.....	6SN7GT
6SN7GT/A	T-9	Duodiode	8BD	Cathode	6.3	.6	4.0* 3.8*	2.2* 2.6*	0.7* 0.7*	Vertical Osc. Amp.	.....	.....	.....	.....	.....	.....	.....	.....	.....	6SN7GT/A
6SN7WGT (3)	GT	Duodiode	8BD-0-0	Cathode	6.3	0.60	.....	.....	.....	Amplifier	.....	.....	.....	.....	.....	.....	.....	.....	.....	6SN7WGT (3)
6SQ7	Metal	Duodiode Tri.	8Q-1-1	Cathode	6.3	0.30	1.6	3.2	3.0	Det. Amp.	250	2.0	0.9	.....	91,000	1,100	100	.....	.....	6SQ7
6SQ7GT	GT	Duodiode Tri.	8Q-1-3	Cathode	6.3	0.30	1.8	4.2	3.4	Det. Amp.	250	2.0	.....	.....	.....	.....	.....	.....	.....	6SQ7GT
6SR7	Metal	Duodiode Tri.	8Q-1-1	Cathode	6.3	0.30	2.3	3.0	3.0	Det. Amp.	250	9.0	9.5	.....	8,500	1,900	16	.....	.....	6SR7
6SR7GT	GT	Duodiode Tri.	8Q-0-3	Cathode	6.3	0.30	2.3	3.5	3.8	Det. Amp.	250	9.0	.....	.....	.....	.....	.....	.....	.....	6SR7GT
6SS7	Metal	Pentode	8N-1-0	Cathode	6.3	0.15	.004m	5.5	7.0	R-F Amp.	250	1.0	100	12.2	3.1	120,000 $\downarrow$ 1,000,000 $\downarrow$	1,950 1,850	.....	.....	6SS7
6ST7	Metal	Duodiode Tri.	8Q-1-0	Cathode	6.3	0.15	1.5	2.8	3.0	Det. Amp.	250	9.0	9.5	.....	8,500	1,900	16.0	.....	.....	6ST7
6SU7GTY	GT	Duodiode	8BD-0-0	Cathode	6.3	0.30	.....	.....	.....	Amplifier	250	2.0	.....	.....	.....	.....	.....	.....	.....	6SU7GTY
6SV7	Metal	Diode Pent.	7AZ-1-0	Cathode	6.3	0.30	0.004m	6.5	6.0	Det. Amp.	250	1.0	150	7.5	2.8	1.5 Meg.	3,600	70	.....	6SV7
6SZ7	Metal	Duodiode Tri.	8Q-1-0	Cathode	6.3	0.15	1.1	2.6	2.8	Amplifier	250	3.0	1.0	.....	58,000	1,200	70	.....	.....	6SZ7
6T4	T-5½	Triode	7DK	Cathode	6.3	0.925	1.7*	2.6*	0.40*	UHF Osc.	80	150	18	.....	1,860	7,000	13	.....	.....	6T4
6T5	ST-12	Electron Ray	6R-0-0	Cathode	6.3	0.3	.....	.....	.....	Indicator	250§	Series Plate Resistor 1.0 Meg. Target Current 3.0 Ma. Grid Bias 22 Volts for Max. Target Illumination.	.....	.....	.....	.....	.....	.....	.....	6T5
6T7G	ST-12	Duodiode Tri.	7V-0-8	Cathode	6.3	0.15	1.7	1.8	3.1	Det. Amp.	100 250	1.5 3.0	0.3 1.2	.....	95,000 62,000	680 1,950	65 65	.....	.....	6T7G
6T8	T-6½	Triple Diode Triode	9E-0-3 & 7	Cathode	6.3	0.45	2.4*	1.5*	1.1*	Det. Amp.	100 250	1 3	0.80 1.0	.....	1,300 1,900	70 70	.....	.....	.....	6T8

# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction		Emitter		Note (1) (2) Capacitances in $\mu\text{f}$ .		Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load or Stated Power Output	Undistorted Power Output Milli-watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Count									
6U4GT	GT	Diode	4CG-0-0	Cathode	6.3	1.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6U4GT
6U5	T-9	Electron Ray	6R-0-0	Cathode	6.3	0.30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6U5
6U6GT	GT	Beam Amp.	7S-0-0	Cathode	6.3	0.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6U6GT
6U7G	ST-12	Pentode	7R-0-8	Cathode	6.3	0.30	.007m	5.0	9.0	.....	.....	.....	.....	.....	.....	.....	.....	6U7G
6U8	T-6 $\frac{1}{2}$	Triode Pentode	9AE	Cathode	6.3	0.45	0.01	5.0	9.6	.....	.....	.....	.....	.....	.....	.....	.....	6U8
6V3	T-6 $\frac{1}{2}$	Diode	9BD	Cathode	6.3	1.75	0.006	5.0	3.5	.....	.....	.....	.....	.....	.....	.....	.....	6V3
6V4	T-6 $\frac{1}{2}$	Duodiode	9M-0-0	Cathode	6.3	0.6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6V4
6V5GT	GT	Pentode	6AO-0-0	Cathode	6.3	0.45	0.6	9.0	10.0	.....	.....	.....	.....	.....	.....	.....	.....	6V5GT
6V6	Metal	Beam Amp.	7S-1-0	Cathode	6.3	0.45	0.3	10.0	11.0	.....	.....	.....	.....	.....	.....	.....	.....	6V6
6V6GT	GT	Beam Amp.	7S-0-0	Cathode	6.3	0.45	0.7*	9.5*	7.5*	.....	.....	.....	.....	.....	.....	.....	.....	6V6GT
6V7G	ST-12	Duodiode Tri.	7V-0-8	Cathode	6.3	0.30	1.3	1.5	6.0	.....	.....	.....	.....	.....	.....	.....	.....	6V7G
6V8	T-6 $\frac{1}{2}$	Triode Diode Triode	9AH-0-3	Cathode	6.3	0.45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6V8
6W4GT	GT	Diode	4CG-0-0	Cathode	6.3	1.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6W4GT
6W5G	ST-12	Duodiode	6S-0-0	Cathode	6.3	0.9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6W5G
6W6GT	GT	Beam Amp.	7S-0-0	Cathode	6.3	1.90	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6W6GT
6W7G	ST-12	Pentode	7R-0-8	Cathode	6.3	0.15	.007m	5.0	8.5	.....	.....	.....	.....	.....	.....	.....	.....	6W7G
6X4	Miniature	Duodiode	5BS-0-0	Cathode	6.3	0.60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6X4

(1) Values are given shielded unless marked with (\*).  
 (2) Converter tube capacitances given are signal grid to plate;  
 RF Input, Mixer Output.

(3) Has special mechanical and/or life characteristics.  
 With Average Power Input of 300 Mw. Grid to Grid.  
 For two tubes with 40 volts RMS applied to each grid.

4-CG	6-AB	6-AW	6-Q	6-R	6-S	7-AZ	7-DK	7-R
7-S	7-U	7-V	8-AD	8-BD	8-BK	8-CB	8-N	8-R
9-A	9-AC	9-AE	9-AH	9-BD	9-E	9-M	9-N	9-S

SYMBOLS FOR BASE DIAGRAMS:  
 A—Anode; A1—Anode 1; A2—Anode 2; D1—Deflector 1; D2—Deflector 2; F—Filament; Fc—Filament Center; G—Control Grid; Gc—Anode Grid; Gm—Modulator Grid; Go—Oscillator Grid;  
 Gq—Quadrature Grid; Gs—Screen Grid; H—Heater; Hc—Heater Center; Ht—Heater Tap; IC—Internal Connection; J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode;  
 Su—Suppressor Grid; T—Target; X5—External Shield;  $\square$ —Top Cap;  $\rightarrow$ —Locating Pin.

# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

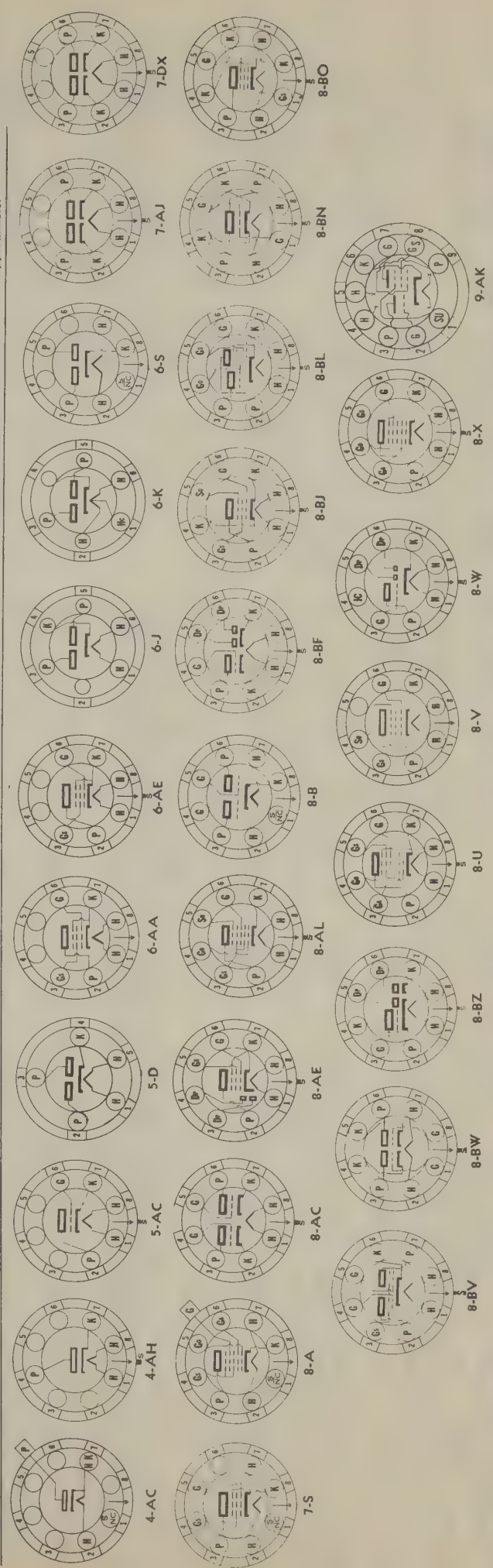
Type	Construction		Emitter		Note (1) (2) Capacitances in $\mu\mu\text{f}$ .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transcon- ductance Micromhos	Ampli- fication Factor	Ohms Load for Stated Power Output	Undis- torted Power Output Milli- watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.												
6X5GT, 6X5	GT, Metal	Duodiode	6S-0-0	Cathode	6.3	0.60		F-W Rect.	325 A-C Volts Per Plate, RMS, 70 Ma. Output Current. 450 A-C Volts Per Plate, RMS, 70 Ma. Output Current.									6X5GT, 6X5	
6X5WGT (3)	GT	Duodiode	6S-0-0	Cathode	6.3	0.60		F-W Rect.	Characteristics Same as Type 6X5GT.	100 100 <sup>†</sup> 250 200 <sup>†</sup>	8.5 7.7	1.6	6,900 $\phi$ .75 Meg.	5,800 $\phi$ 4,600	40			6X5WGT (3)	
6X8	T-6 1/2	Triode Pentode	9AK	Cathode	6.3	0.45	1.4 0.06	9.6 4.5 1.4	1.0 1.4	Oscillator Mixer								6X8	
6Y3G	ST-12	Diode	4AC-0-0	Cathode	6.3	0.7				H-W Rect.	5,000 A-C Volts Per Plate, RMS, 7.5 Ma. Output Current.							6Y3G	
6Y5	ST-12	Duodiode	6J-2-0	Cathode	6.3	0.80				F-W Rect.	350 A-C Volts Per Plate, RMS, 50 Ma. Output Current.							6Y5	
6Y6G	ST-14	Beam Amp.	7S-0-0	Cathode	6.3	1.25				Power Amp.	135 13.5 200 14.0 135 61.0	58.0 2.2	3.5 2.2	9,300 7,000 7,100		9,000 2,000 6,000	6Y6G		
6Y6GA	T-12	Duotriode	7S-0-0	Cathode	6.3	1.25				Power Amp.	180 0.0 250 0.0	7.5 <sup>#</sup> 10.5 <sup>#</sup>		(Class B Operation) (Class B Operation)		7,000 <sup>†</sup> 14,000 <sup>†</sup>	5,000 8,000	6Y6GA	
6Y7G	ST-12	Duotriode	8B-0-0	Cathode	6.3	0.60				Power Amp.	325 A-C Volts Per Plate, RMS, 60 Ma. Output Current. 450 A-C Volts Per Plate, RMS, 60 Ma. Output Current.							6Y7G	
6Z4	ST-12	Duodiode	5D-0-0	Cathode	6.3	0.50				F-W Rect.	230 A-C Volts Per Plate, RMS, 60 Ma. Output Current.							6Z4	
6Z5/12Z5	ST-12	Duodiode	6K-0-0	Cathode	6.3	0.80 12.6 0.40				F-W Rect.	135 0.0 180 0.0	3.0 <sup>#</sup> 4.2 <sup>#</sup>		(Class B Operation) (Class B Operation)		9,000 <sup>†</sup> 12,000 <sup>†</sup>	2,500 <sup>†</sup> 4,300 <sup>†</sup>	6Z5/12Z5	
6Z7G	ST-12	Duotriode	8B-0-0	Cathode	6.3	0.30				Power Amp.	325 A-C Volts Per Plate, RMS, 40 Ma. Output Current.							6Z7G	
6Z7Y5G	ST-12	Duodiode	6S-0-0	Cathode	6.3	0.30				F-W Rect.	90 0.0 250 0.0	10.0 9.0		6,700 3,000 2,600	20 20			6Z7Y5G	
7A4	Lock-in	Triode	5AC-L-0	Cathode	6.3	0.30	4.0	3.4	3.0	Amplifier								7A4	
7A5	Lock-in	Beam Amp.	6AA-L-0	Cathode	6.3	0.75	0.44	13.0	7.2	Power Amp.	110 7.5 125 9.0	40.0 44.0	3.0 3.3	14,000 17,000	5,800 6,000	2,500 2,700		7A5	
7A6	Lock-in	Duodiode	7DX-L-5	Cathode	6.3	0.15				Det. Rect.	150 A-C Volts Per Plate, RMS, 8 Ma. Current Output Per Plate.							7A6	
7A7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.30	.003m	6.0	7.0	R-F Amp.	100 1.0 250 3.0	13.0 9.2	4.0 2.6	180,000 $\phi$ 800,000 $\phi$	2,350 2,000			7A7	
7A8	Lock-in	Octode	8U-L-7	Cathode	6.3	0.15	0.15m	7.5	9.0	Converter	100 3.0 250 3.0	7.5 3.8	2.7 3.2	650,000 $\phi$ 700,000 $\phi$	375A 550A	(Ga = 100 V, 2.8 Ma.) (Ga = 250 V, 4.8 Ma.)		7A8	
7AB7	Lock-in	Pentode	8B0-L-0	Cathode	6.3	0.15	.06m	3.5	4.0	R-F Amp.	250 2.0 300 Self	100 28	1.3 7.0	500,000 300,000	1,800 9,500	(Rk = 68 Ohms) (Rk = 68 Ohms)		7AB7	
7AD7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.60	0.03	11.5	7.5	TV Amplifier	300 Self 300 Self	125 25	6.0					7AD7	
7AF7	Lock-in	Duotriode	8AC-L-0	Cathode	6.3	0.30	2.3*	2.2*	1.6*	Amplifier (per unit)	100 0 100 3.0 250 10	10.8 5.0 9.0		6,500 8,400 7,600	2,600 1,900 2,100	17 16 16		7AF7	
7AG7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.15	.005m	7.0	6.0	R-F Amp.	250 2.0 300 Self	6.0 2.0	2.0 2.0	750,000 4,200	4,200	(Rk = 850 Ohms) (Rk = 850 Ohms)		7AG7	
7AH7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.3	.005m	7.0	6.5	R-F Amp.	250 2.0 300 Self	6.8 1.9	1.9 1.9	1 Meg. 3,300	3,300	(Rk = 850 Ohms) (Rk = 850 Ohms)		7AH7	
7AJ7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.3	.007m	6.0	6.5	R-F Amp.	100 1.0 250 3.0	5.7 2.2	1.8 0.7	400,000 >1.0 Meg.	2,275 1,575			7AJ7	
7AK7	Lock-in	Pentode	8V-L-0	Cathode	6.3	0.8	4.0 SutoP 0.7	12.0	9.5	R-F Amp.	150 0 150 11 150 0	40 2.0 Max. 2.0 Max.	21 0.45 43 Max.	11,500 6,500	6,500			7AK7	
7B4	Lock-in	Triode	5AC-L-0	Cathode	6.3	0.30	1.6	3.2	3.2	Amplifier	100 1.0 250 2.0	0.4 0.9		85,000 66,000	1,150 1,500	100 100		7B4	
7B5	Lock-in	Pentode	6AE-L-0	Cathode	6.3	0.40	0.8	7.4	8.0	Power Amp.	100 7.0 250 18.0 315 21.0	9.0 32.0 25.5	1.6 5.5 4.0	104,000 68,000 75,000	1,500 2,300 2,100	12,000 7,600 9,000	350 3,400 4,500	7B5	
7B6	Lock-in	Duodiode Tri.	8W-L-7	Cathode	6.3	0.30	1.6	3.0	2.4	Det. Amp.	100 1.0 250 2.0	0.4 0.9		110,000 91,000	900 1,100	100 100		7B6	
7B7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.15	.004m	5.0	6.0	R-F Amp.	100 3.0 250 3.0	8.2 8.5	1.8 1.7	300,000 750,000	1,675 1,750			7B7	
7B8	Lock-in	Heptode	8X-L-0	Cathode	6.3	0.30	0.2m	10.0	9.0	Converter	100 1.5 250 3.0	1.1 3.5	1.3 2.7	600,000 360,000	360A 350A	(Ga = 100 V, 2.0 Ma.) (Ga = 250 V, 4.0 Ma.)		7B8	
7C4	Lock-in	H. F. Diode	4AH-L-0	Cathode	6.3	0.15				Detector	180 8.5 250 12.5	29.0 45.0	3.0 4.5	58,000 52,000	3,700 4,100	5,500 5,000		7C4	
7C5	Lock-in	Beam Amp.	6AA-L-0	Cathode	6.3	0.45	0.40	9.5	9.0	Power Amp. Class A	180 8.5 250 12.5 315 13.0 385 15.0 385 19.0	29.0 45.0 34.0 70.0	3.0 4.5 2.8 4.0	58,000 52,000 77,000 (Class AB1 Two Tubes) (Class AB1 Two Tubes)	3,700 4,100 3,750	5,500 5,000 10,000 <sup>†</sup> 8,000 <sup>†</sup>	9,000 4,500 5,500 10,000 <sup>†</sup> 14,000	7C5	
7C6	Lock-in	Duodiode Tri.	8W-L-7	Cathode	6.3	0.15	1.6	2.4	2.4	Det. Amp.	100 0.0 250 1.0	1.0 1.3		100,000 100,000	850 1,000	85 100		7C6	
7C7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.15	.004m	5.5	6.5	R-F Amp.	100 3.0 250 3.0	1.8 2.0	0.4 0.5	1.2 Meg. 2.0 Meg.	1,235 1,300			7C7	
7E5	Lock-in	Triode	8BN-L-0	Cathode	6.3	0.15	1.5	3.6	2.8	Osc. Amp.	250 3.5 150 10.2	13.0 16.0		Oscillator for 750 mc. Service. Oscillator-Amplifier for 300 mc. Service.	200			7E5	
7E6	Lock-in	Duodiode Tri.	8W-L-7	Cathode	6.3	0.30	1.5	3.0	2.4	Det. Amp.	250 9.0 100 3.0	9.5 3.9		8,500 11,000	1,900 1,500	16 16.5	900	7E6	
7E7	Lock-in	Duodi. Pent.	8AE-L-7	Cathode	6.3	0.30	.005m	4.6	5.5	Det. Amp.	100 1.0 250 3.0	10.0 7.5	2.7 1.6	150,000 700,000	1,600 1,300			7E7	
7F7	Lock-in	Duotriode	8AC-L-0	Cathode	6.3	0.30	1.6	2.4	2.0	Amplifier#	100 1.0 250 2.0	0.65 2.3		62,000 44,000	1,125 1,600	70 70		7F7	
7F8	Lock-in	Duotriode	8BW-L-0	Cathode	6.3	0.30	1.9#	2.8#	1.4	Osc. Amp.	250 Self	6.0#		3,300#		(Rk = 500 Ohms)		7F8	
7F8W (3)	Lock-in	Duotriode	8BW-L-0	Cathode	6.3	0.30	1.6	3.0	1.7	Osc. Amp.	250 Self	11.0		5,900		(Rk = 200 Ohms)		7F8W (3)	

# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction		Emitter		Note (*) (†) Capacitances in $\mu\text{f}$ .		Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type	
	Bulb Size or Style	Basing Diag.	Type	Volts	Amps.	Cgp.													Cin.
7G7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.45	.006m	9.0	7.0	R-F Amp.	250	2.0	100	6.0	800,000 $\pm$	4,500	.....	7G7	
7G8	Lock-in	Duotrode	8BV-L-0	Cathode	6.3	0.30	0.15m	3.4	2.6	R-F Amp. #	250	2.5	100	4.5	295,000 $\pm$	2,100	.....	7G8	
7H7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.30	.004m	8.0	7.0	Amplifier	100	1.5	100	7.5	350,000 $\pm$	4,000	.....	7H7	
7J7	Lock-in	Tri. Heptode	8BL-L-7	Cathode	6.3	0.30	.03m	4.6	7.5	Hep. Mixer	100	3.0	100	1.5	500,000 $\pm$	280 $\Delta$	(Rk = 180 Ohms)	7J7	
											250	3.0	100	1.4	2.8	1.5 Meg.			590 $\Delta$
											100	0.05 Meg.	3.2	(Triode Grid Current 0.3 Ma.)	.....				
						250 $\square$	5.0	.....	2.3	44,000	1,600	70	.....	.....	.....	7K7			
7K7	Lock-in	Duodiode Tri.	8BF-L-7	Cathode	6.3	0.30	1.8	2.6	3.0	Det. Amp.	250	2.0	100	5.5	100,000 $\pm$	3,000	.....	7L7	
7L7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.30	.010m	8.0	6.5	R-F Amp.	100	1.0	100	5.5	1.0 Meg.	3,100	.....	7L7	
7N7	Lock-in	Duotrode	8AC-L-0	Cathode	6.3	0.60	3.0	3.4	2.0	Amplifier (per unit)	90	0.0	.....	10.0	6,700	3,000	.....	7N7	
7Q7	Lock-in	Heptode	8AL-L-0	Cathode	6.3	0.30	0.15m	9.0	9.0	Converter	100	2.0	100	3.3	500,000 $\pm$	525 $\Delta$	(Osc. Grid Resistor 30,000)	7Q7	
											250	2.0	100	3.5	1.0 Meg.	550 $\Delta$			
7R7	Lock-in	Duodi. Pent.	8AE-L-7	Cathode	6.3	0.30	.004m	5.6	5.3	Det. Amp.	100	2.0	100	3.4	500,000 $\pm$	2,100	.....	7R7	
											100	1.0	100	5.5	2.2	350,000 $\pm$			3,000
											250	2.0	100	3.5	1.0	1,800,000 $\pm$			2,200
											250	1.0	100	6.2	1.6	1,000,000 $\pm$			3,400
7S7	Lock-in	Tri. Heptode	8BL-L-7	Cathode	6.3	0.30	.03m	5.0	8.0	Hep. Mixer	100	2.0	100	1.9	500,000 $\pm$	500 $\Delta$	.....	7S7	
											250	2.0	100	1.8	3.0	1.95 Meg.			525 $\Delta$
											100	0.05 Meg.	3.0	(Triode Grid Current 0.3 Ma.)	.....				
											250 $\square$	5.0	.....	(Triode Grid Current 0.4 Ma.)	.....				
7T7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.3	.005m	8.0	7.0	R-F Amp.	250	1.0	150	10.8	900,000 $\pm$	4,900	.....	7T7	
7V7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.45	.002m	9.5	6.5	R-F Amp.	300	Self	150	10.0	300,000	5,800	.....	7V7	
7W7	Lock-in	Pentode	8BJ-L-5	Cathode	6.3	0.45	.002m	9.5	7.0	R-F Amp.	235 Volts Per Plate, RMS, 75 Ma. DC Output Per Plate.	117 Volts Per Plate, RMS, 75 Ma. DC Output.	.....	.....	.....	.....	7W7		
7X6	Lock-in	Duodiode	7DX-L-0	Cathode	6.3	1.2	.....	.....	.....	H-W Rect. Doubler	235 Volts Per Plate, RMS, 75 Ma. DC Output.	.....	.....	.....	.....	.....	7X6		
7X7	Lock-in	Duodiode Tri.	8BZ-L-4	Cathode	6.3	0.30	.....	.....	.....	Det. Amp.	100	0	.....	1.2	85,000	1,000	.....	7X7	
											250	1.0	.....	1.9	67,000	1,500			
(1) Values are given shielded unless marked with (*). (2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output. (3) Has special mechanical and/or life characteristics. §§ With Average Power Input of 320 Mw. Grid to Grid. †† For two tubes with 40 volts RMS applied to each grid.																			m maximum ■ Cathode Resistor
* Applied through 20,000 ohms. † Pentode Operation. ‡ Plate to Plate. § Conversion Transconductance. §§ Plate and Target Supply Voltage. †† Triode Operation.																			

(1) Values are given shielded unless marked with (\*).  
 (2) Converter tube capacitances given are signal grid to plate;  
 RF Input, Mixer Output.  
 (3) Has special mechanical and/or life characteristics.  
 \* Applied through 250,000 ohms.  
 # Per Tube or Section.  
 † Plate and Target Supply Voltage.

† Pentode Operation.  
 ‡ Triode Operation.  
 § Conversion Transconductance.  
 ¶ Approximate.



SYMBOLS FOR BASE DIAGRAMS: A—Anode; A1—Anode 1; A2—Anode 2; D1—Deflector 1; D2—Deflector 2; F—Filament; Fc—Filament Center; G—Control Grid; Gm—Modulator Grid; Go—Oscillator Grid; Gq—Quadrature Grid; Gs—Screen Grid; H—Heater; Hc—Heater Center; Ht—Heater Tap; IC—Internal Connection; J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode; Su—Suppressor Grid; T—Target; XS—External Shield; □—Top Cap; —>—Locating Pin.

# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction		Emitter		Note (1) (?) Capacitances in $\mu\mu$ .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type
	Bulb Size or Style	Class	Base Diag.	Type	Volts	Amps.	Cap.												
7Y4	Lock-in	Duodiode	5AB-L-0	Cathode	6.3	0.50	.....	.....	.....	.....	F-W Rect.	325 A-C Volts Per Plate, RMS; 70 Ma. Output Current.	.....	.....	.....	.....	.....	7Y4	
7Z4	Lock-in	Duodiode	5AB-L-0	Cathode	6.3	0.90	.....	.....	.....	.....	F-W Rect.	450 A-C Volts Per Plate, RMS; 70 Ma. Output Current.	.....	.....	.....	.....	.....	7Z4	
10	ST-16	Triode	4D-0-0	Filament	7.5	1.25	7.0*	4.0*	3.0*	.....	Power Amp.	250 32.5 ..... 10.0 ..... 6,000 1,330 ..... 8.0 ..... 13,000 400	.....	.....	.....	.....	.....	10	
12A	ST-14	Triode	4D-0-0	Filament	5.0	0.25	8.5*	4.0*	2.0*	.....	Det. Amp.	350 32.0 ..... 16.0 ..... 5,150 1,550 ..... 8.0 ..... 11,000 900	.....	.....	.....	.....	.....	12A	
12A4	T-6½	Triode	9AG-0-0	Cathode	6.3	0.60	5.6*	4.9*	0.9*	.....	Amplifier	425 40.0 ..... 18.0 ..... 5,000 1,600 ..... 8.5 ..... 10,650 285	.....	.....	.....	.....	.....	12A4	
12A5	ST-12	Pentode	7F-0-0	Cathode	12.6	0.30	0.3	9.0	9.0	.....	Power Amp.	100 15.0 ..... 17.0 ..... 50,000 1,700 ..... 3.0 ..... 4,500 800	.....	.....	.....	.....	.....	12A5	
12A6	Metal	Beam Amp.	7S-1-0	Cathode	12.6	0.15	.....	.....	.....	.....	Power Amp.	180 25.0 ..... 18.0 ..... 35,000 2,400 ..... 8.0 ..... 4,500 3,400	.....	.....	.....	.....	.....	12A6	
12A6GT	GT	Beam Amp.	7S-0-0	Cathode	12.6	0.15	.....	.....	.....	.....	Power Amp.	250 12.5 ..... 30 ..... 70,000 3,000 ..... 3.5 ..... 7,500 3,400	.....	.....	.....	.....	.....	12A6GT	
12A7	ST-12	Diode Pent.	7K-0-0	Cathode	12.6	0.30	.....	.....	.....	.....	H-W Rect.	250 12.5 ..... 30 ..... 70,000 3,000 ..... 3.5 ..... 7,500 3,400	.....	.....	.....	.....	.....	12A7	
12A8GT	GT	Heptode	8A-1-0	Cathode	12.6	0.15	.26	9.5	12.0	.....	Power Amp.	135 RMS 13.5 ..... 30.0 Max ..... 105,000 975 ..... 100 ..... 13,500 550	.....	.....	.....	.....	.....	12A8GT	
12AH7GT	GT	Duodiode	8BE-0-0	Cathode	12.6	0.15	3.0	2.8	2.6	.....	Converter	100 3.6 ..... 3.7 ..... 10,300 1,550 ..... 16 ..... 4,500 800	.....	.....	.....	.....	.....	12AH7GT	
12AL5	Miniature	Duodiode	6BT-0-6	Cathode	12.6	0.15	.....	.....	.....	.....	Amplifier (per unit)	180 6.5 ..... 7.6 ..... 8,400 1,900 ..... 16 ..... 4,500 800	.....	.....	.....	.....	.....	12AL5	
12AQ5	T-5½	Beam Amp.	7BT-0-0	Cathode	12.6	0.225	0.35*	8.3*	8.2*	.....	Detector	Characteristics Same as Type 6AL5.	.....	.....	.....	.....	.....	.....	12AQ5
12AT6	Miniature	Duodiode Tri.	7BT-0-0	Cathode	12.6	0.15	.....	.....	.....	.....	Power Amp.	Characteristics Same as Type 6AQ5.	.....	.....	.....	.....	.....	.....	12AT6
12AT7	T-6½	Duodiode	9A-0-0	Cathode	6.3	0.30	1.45* 1.45* 1.45*	2.5* 2.5* 2.5*	0.45* 0.35*	.....	Amplifier	100 1 ..... 3.7 ..... 4,000 ..... 54 ..... 6,600 ..... 62 ..... 5,500 ..... 55	.....	.....	.....	.....	.....	12AT7	
12AU6	Miniature	Pentode	7BK-0-2	Cathode	12.6	0.15	.0035m*	5.5*	5.0*	.....	R-F Amp.	Characteristics Same as Type 6AU6.	.....	.....	.....	.....	.....	.....	12AU6
12AU7	T-6½	Duodiode	9A-0-0	Cathode	12.6	0.15	1.5*	1.6*	0.50* 0.35*	.....	Amplifier	250 8.5 ..... 10.5 ..... 7,700 2,200 ..... 17 ..... 3,100 ..... 19.5	.....	.....	.....	.....	.....	12AU7	
12AV6	Miniature	Duodiode Tri.	7BT-0-0	Cathode	12.6	0.15	.....	.....	.....	.....	Det. Amp.	Characteristics Same as Type 6AV6.	.....	.....	.....	.....	.....	.....	12AV6
12AV7	T-6½	Duodiode	9A-0-0	Cathode	12.6	0.325	1.9	3.2	1.3	.....	Amplifier	100 Self ..... 9.0 ..... 6,100 6,100 ..... 37 ..... 8,500 ..... 41	.....	.....	.....	.....	.....	12AV7	
12AW6	Miniature	Pentode	7CM-0-7	Cathode	12.6	0.15	.025m*	6.5*	1.5*	.....	R-F Amp.	250 Self ..... 7.0 ..... 0.8 Mes. ..... 2.0 ..... 5,000 ..... 2.1 ..... 5,100 ..... 1.6 ..... 4,750 ..... 1.6	.....	.....	.....	.....	.....	12AW6	
12AX4GT	T-9	Diode	4CG	Cathode	12.6	0.6	.....	.....	.....	.....	T.V. Damper	P.I.V. = 4,000 Volts Max., D-C Plate Current = 125 Ma. Max.	.....	.....	.....	.....	.....	.....	12AX4GT
12AX7	T-6½	Duodiode	9A-0-0	Cathode	12.6	0.15	1.7*	1.6*	0.46* 0.34*	.....	Amplifier	100 1 ..... 0.5 ..... 80,000 1,250 ..... 100 ..... 1,600 ..... 100	.....	.....	.....	.....	.....	12AX7	
12AY7	T-6½	Duodiode	9A-0-0	Cathode	12.6	0.15	1.3*	1.3*	0.6*	.....	Audio Amp. #	250 2 ..... 1.2 ..... 69,500 ..... 1,750 ..... 40 ..... 1,750 ..... 40	.....	.....	.....	.....	.....	12AY7	
12AZ7	T-6½	Duodiode	9A-0-0	Cathode	6.3	0.45	1.9 3.2 1.3	3.2 1.3	1.6	.....	Amplifier	100 Self ..... 3.7 ..... 15,000 4,000 ..... 60 ..... 5,500 ..... 60	.....	.....	.....	.....	.....	12AZ7	
12B4	T-6½	Triode	9AG	Cathode	6.3/12.6	0.6/0.3	4.0	6.2	4.2	.....	Power Amp.	150 17.5 ..... 35 ..... 6,500 ..... 6.5	.....	.....	.....	.....	.....	12B4	
12B7	Now Known as Type 14A7																		12B7
12B8GT	GT	Pentode Tri.	8T-0-1	Cathode	12.6	0.30	.015* 2.3	5.2* 5.0	6.3*	.....	Pent. Amp. Tri. Amp.	90 3.0 ..... 7.0 ..... 2.0 ..... 200,000 1,800 ..... 90 ..... 35,000 ..... (Pentode Section) (Triode Section)	.....	.....	.....	.....	.....	12B8GT	
12BA6	Miniature	Pentode	7BK-0-0	Cathode	12.6	0.15	.....	.....	.....	.....	Converter	Characteristics Same as Type 6BA6.	.....	.....	.....	.....	.....	.....	12BA6
12BA7	T-6½	Heptode	8CT-0-6A8	Cathode	12.6	0.15	.19m	9.5	8.3	.....	Characteristics Same as Type 6BA7.	.....	.....	.....	.....	.....	.....	.....	12BA7
12BD6	Miniature	Pentode	7BK-0-2	Cathode	12.6	0.15	0.004	4.3	5.0	.....	R-F Amp.	Characteristics Same as Type 6BD6.	.....	.....	.....	.....	.....	.....	12BD6
12BE6	Miniature	Heptode	7CH-0-0	Cathode	12.6	0.15	.....	.....	.....	.....	Converter	Characteristics Same as Type 6BE6.	.....	.....	.....	.....	.....	.....	12BE6
12BF6	Miniature	Duodiode Tri.	7BT-0-0	Cathode	12.6	0.15	2.0	1.8	1.1	.....	Det. Amp.	250 9.0 ..... 9.5 ..... 8,500 1,900 ..... 16 ..... 6,200 ..... 3,100 ..... 17 ..... 560 Ohms	.....	.....	.....	.....	.....	12BF6	
12BH7	T-6½	Duodiode	9A-0-0	Cathode	6.3	0.60	2.4 2.4	3.0 3.0	2.6	.....	Amplifier	85 0 ..... 9.0 ..... 9.0 ..... 6,200 ..... 3,100 ..... 16 ..... 560 Ohms	.....	.....	.....	.....	.....	12BH7	
12BK6	Miniature	Duodiode Tri.	7BT-0-2	Cathode	12.6	0.15	.....	.....	.....	.....	Det. Amp.	100 1.0 ..... 0.5 ..... 80,000 1,250 ..... 100 ..... 1,600 ..... 100	.....	.....	.....	.....	.....	12BK6	
12BN6	Miniature	Pentode	7DF-0-1	Cathode	12.6	0.15	.....	.....	.....	.....	Limit Discrim.	65 1.3 60 0.23 5.	.....	.....	.....	.....	.....	.....	12BN6
12BT6	Miniature	Duodiode Tri.	7BT-0-2	Cathode	12.6	0.15	.....	.....	.....	.....	Det. Amp.	100 1.0 ..... 0.8 ..... 54,000 1,300 ..... 70 ..... 1,200 ..... 70	.....	.....	.....	.....	.....	12BT6	
12BU6	Miniature	Duodiode Tri.	7BT-0-2	Cathode	12.6	0.15	.....	.....	.....	.....	Det. Amp.	250 3.0 ..... 3.9 ..... 11,000 1,500 ..... 16.5 ..... 1,900 ..... 16.5	.....	.....	.....	.....	.....	12BU6	
12BY7	T-6½	Pentode	9BF	Cathode	12.6	0.6	0.055	11.1	3.0	.....	Video Amp.	250 68# 150 25 6.0 ..... 12,000 28**	.....	.....	.....	.....	.....	12BY7	
12BZ7	T-6½	Duodiode	9A-0-0	Cathode	6.3	0.6	0.45	6.5	.....	.....	Sync Sep. or Amplifier #	250 2 ..... 2.5 ..... 31,800 3,200 ..... 100 ..... 3,200 ..... 100	.....	.....	.....	.....	.....	12BZ7	
12C8	Metal	Duodi. Pent.	8E-1-1	Cathode	12.6	0.15	.....	.....	.....	.....	Det. Amp.	Characteristics Same as Type 6B8.	.....	.....	.....	.....	.....	.....	12C8
12CM6	T-6½	Beam Amp.	9CK-0-0	Cathode	12.6	0.225	.005m	6.0	9.0	.....	Power Amp.	Characteristics Same as Type 6CM6.	.....	.....	.....	.....	.....	.....	12CM6
12ESGT	GT	Triode	6Q-1-0	Cathode	12.6	0.15	2.6	3.4	5.5	.....	Amplifier	100 5.0 ..... 5.0 ..... 18,000 1,150 ..... 13.8 ..... 1,450 ..... 13.8	.....	.....	.....	.....	.....	12ESGT	
12F5GT	GT	Triode	5M-0-0	Cathode	12.6	0.15	2.8*	2.8*	3.2*	.....	Amplifier	Characteristics Same as Type 6F5GT.	.....	.....	.....	.....	.....	.....	12F5GT
12G4	T-5½	Triode	6BG	Cathode	12.6	0.15	3.4	2.6	3.2	.....	Amplifier	Identical to One Section of Type 6SN7GT.	.....	.....	.....	.....	.....	.....	12G4

# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction		Emitter		Note (*) Capacitances in $\mu\mu\text{f}$ .		Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type
	Bulb Size or Style	Class	Base	Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout								
12H4	T-5½	Triode	7DW		Cathode	6.3/12.6	0.3/0.15	3.4	2.6	3.2	90	.....	.....	3,000	20	.....	.....	12H4
12H6	Metal	Duodiode	7Q-1-1		Cathode	12.6	0.15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12H6
12J5GT	GT	Triode	6Q-0-0		Cathode	12.6	0.15	3.8	4.2	5.0	Characteristics Same as Type 6H6.	.....	.....	.....	.....	.....	.....	12J5GT
12J7GT	GT	Pentode	7R-1-1		Cathode	12.6	0.15	.007m	5.4	12.0	Characteristics Same as Type 6J7G.	.....	.....	.....	.....	.....	.....	12J7GT
12K7GT	GT	Pentode	7R-1-8		Cathode	12.6	0.15	.007m	5.0	12.0	Characteristics Same as Type 6K7G.	.....	.....	.....	.....	.....	.....	12K7GT
12K8	Metal	Tri. Hexode	8K-1-8		Cathode	12.6	0.15	.03m	6.6	3.5	Characteristics Same as Type 6K8GT.	.....	.....	.....	.....	.....	.....	12K8
12K8GT	GT	Tri. Hexode	8K-1-8		Cathode	12.6	0.15	.08m	5.0	4.8	Characteristics Same as Type 6K8GT.	.....	.....	.....	.....	.....	.....	12K8GT
12L8GT	GT	Duo. Pentode	8BU-0-0		Cathode	12.6	0.15	0.7*	5.0*	6.0*	110	5.5	920,000#	1,680#	.....	14,000#	300#	12L8GT
12Q7GT	GT	Duodiode Tri.	7V-1-8		Cathode	12.6	0.15	1.6	2.2	5.0	180	9.0	160,000#	2,150#	.....	10,000#	1,000#	12Q7GT
12S8GT	GT	Tri. Dio. Tri.	8CB-0-2		Cathode	12.6	0.15	.....	.....	.....	Characteristics Same as Type 6Q7GT.	.....	.....	.....	.....	.....	.....	12S8GT
12SA7	Metal	Heptode	8R-1-0		Cathode	12.6	0.15	.13m	9.5	12.0	Characteristics Same as Type 6SA7.	.....	.....	.....	.....	.....	.....	12SA7
12SA7GT	GT	Heptode	8AD-1-6		Cathode	12.6	0.15	.5m	11.0	11.0	Characteristics Same as Type 6SA7GT.	.....	.....	.....	.....	.....	.....	12SA7GT
12SC7	Metal	Duodiode	8S-1-0		Cathode	12.6	0.15	2.0	2.2	3.0	Characteristics Same as Type 6SC7.	.....	.....	.....	.....	.....	.....	12SC7
12SF5	Metal	Triode	6AB-0-0		Cathode	12.6	0.15	2.4	4.0	3.6	Characteristics Same as Type 6SF5.	.....	.....	.....	.....	.....	.....	12SF5
12SF5GT	GT	Triode	6AB-0-0		Cathode	12.6	0.15	2.6	4.2	3.8	Characteristics Same as Type 6SF5GT.	.....	.....	.....	.....	.....	.....	12SF5GT
12SF7	Metal	Diode Pent.	7AZ-1-0		Cathode	12.6	0.15	.004m	5.5	6.0	Characteristics Same as Type 6SF7.	.....	.....	.....	.....	.....	.....	12SF7
12SG7	Metal	Pentode	8BK-1-1		Cathode	12.6	0.15	.003m	8.5	7.0	Characteristics Same as Type 6SG7.	.....	.....	.....	.....	.....	.....	12SG7
12SH7	Metal	Pentode	8BK-1-1		Cathode	12.6	0.15	.003m	8.5	7.0	Characteristics Same as Type 6SH7.	.....	.....	.....	.....	.....	.....	12SH7
12SH7GT	GT	Pentode	8BK-1-1		Cathode	12.6	0.15	.003m	8.5	7.0	Characteristics Same as Type 6SH7GT.	.....	.....	.....	.....	.....	.....	12SH7GT

(1) Values are given shielded unless marked with (\*).

(2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output.

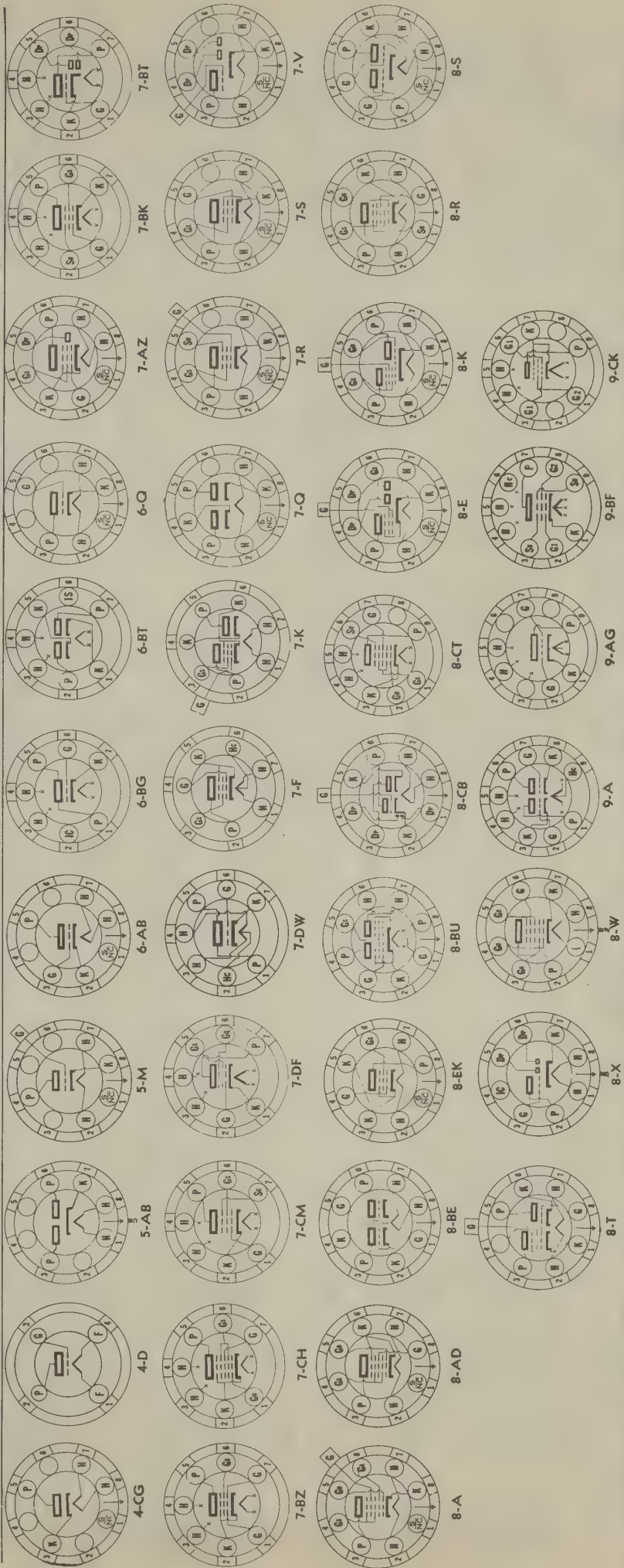
(3) Has special mechanical and/or life characteristics.  
 \*\* With Average Power Input of 350 Mw. Grid to Grid.  
 †† For two tubes with 40 volts RMS applied to each grid.

\* Applied through 950,000 ohms.  
 # Per Tube or Section.  
 ‡ Plate and Target Supply Voltage.

□ Applied through 20,000 ohms.  
 ▲ Conversion Transconductance.  
 \*\* Triode Operation.

‡ Pentode Operation.  
 † Plate to Plate.  
 ‡ Approximate.

m maximum  
 # Cathode Resistor



SYMBOLS FOR BASE DIAGRAMS:  
 A—Anode, A1—Anode 1, A2—Anode 2, D1—Deflector 1, D2—Deflector 2, F—Filament, Fc—Filament Center, G—Control Grid, Gm—Modulator Grid, Go—Oscillator Grid, Gq—Quadrature Grid, Gs—Screen Grid, H—Heater, Hc—Heater Center, Ht—Heater Tap, IC—Internal Connection, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, Su—Suppressor Grid, T—Target, XS—External Shield, □—Top Cap, —> Locating Pin.

# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction		Emitter		Note (1) (?) Capacitances in $\mu\mu\text{f}$ .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Rated Power Output	Undistorted Power Output Milli-watts	Type	
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.													Cin.
19SJ7	Metal	Pentode	8N-1-1	Cathode	12.6	0.15	.005m	6.0	7.0	Characteristics Same as Type 6SJ7.										19SJ7
19SJ7GT	GT	Pentode	8N-1-5	Cathode	12.6	0.15	.005m	6.3	7.5	Characteristics Same as Type 6SJ7, Except Capacitances.										19SJ7GT
19SK7	Metal	Pentode	8N-1-1	Cathode	12.6	0.15	.003m	6.0	7.0	Characteristics Same as Type 6SK7.										19SK7
19SK7GT	GT	Pentode	8N-1-5	Cathode	12.6	0.15	.005m	6.5	7.5	Characteristics Same as Type 6SK7GT.										19SK7GT
19SL7GT	GT	Duodiode	8BD-0-0	Cathode	12.6	0.15	.....	.....	.....	Characteristics Same as Type 6SL7GT.										19SL7GT
19SN7GT	GT	Duodiode	8BD-0-0	Cathode	12.6	0.30	.....	.....	.....	Characteristics Same as Type 6SN7GT.										19SN7GT
19SQ7	Metal	Duodiode Tri.	8Q-1-3	Cathode	12.6	0.15	1.6	3.2	3.0	Characteristics Same as Type 6SQ7.										19SQ7
19SQ7GT	GT	Duodiode Tri.	8Q-1-3	Cathode	12.6	0.15	1.8	4.2	3.4	Characteristics Same as Type 6SQ7GT.										19SQ7GT
19SR7	Metal	Duodiode Tri.	8Q-1-1	Cathode	12.6	0.15	2.3	3.0	3.0	Characteristics Same as Type 6SR7.										19SR7
19SW7	Metal	Duodiode Tri.	8Q-1-0	Cathode	12.6	0.15	2.4	3.0	2.8	Characteristics Same as Type 6SR7.										19SW7
19SX7GT	GT	Duodiode	8BD-0-0	Cathode	12.6	0.30	3.6* 3.6*	3.0* 2.8*	0.8* 1.2*	26.5 Self 9.1 1.1 9.5 15,500 8,500 1,100 1,900 17 (2 Meg. Grid Res.) 96.5 Self 90 8 250 250 11,500 6,700 1,800 3,000 21 (.05 Meg. Grid Res.)										19SX7GT
19SY7	Metal	Heptode	8R-1-0	Cathode	12.6	0.15	.....	.....	.....	Converter 250 2.0 100 100 3.5 8.5 1 Meg. 450 3 50,000 3,700 5,500 2,000 19SY7										19SY7
19V6	T-9	Beam Amp.	7S	Cathode	12.6	0.225	0.7	9.0	7.5	Power Amp. 180 8.5 180 29 3 50,000 3,700 5,000 2,000 19V6										19V6
19X4	T-5½	Duodiode	5BS	Cathode	12.6	0.45	.....	.....	.....	F-W Rect. Identical to the 6X4.										19X4
19Z3	ST-12	Diode	4G-0-0	Cathode	12.6	0.30	.....	.....	.....	H-W Rect. 235 A-C Volts Per Plate, RMS, 55 Ma. Output Current. Condenser Input to Filter.										19Z3
14A4	Lock-in	Triode	5AC-L-0	Cathode	12.6	0.15	4.0	3.4	3.0	Amplifier Characteristics Same as Type 7A4.										14A4
14A5	Lock-in	Beam Amp.	6AA-L-0	Cathode	12.6	0.15	0.4	6.8	7.0	Power Amp. 250 12.5 250 30.0 3.5 70,000 3,000 7,500 2,800 14A5										14A5
14A7	Lock-in	Pentode	8V-L-5	Cathode	12.6	0.15	.003m	6.0	7.0	R-F Amp. Characteristics Same as Type 7A7.										14A7
14AF7/XXD	Lock-in	Duodiode	8AC-L-0	Cathode	12.6	0.15	2.3*	2.2*	1.6*	Amplifier Characteristics Same as Type 7AF7.										14AF7/XXD
14B6	Lock-in	Duodiode Tri.	8W-L-7	Cathode	12.6	0.15	1.5	3.0	2.4	Det. Amp. Characteristics Same as Type 7B6.										14B6
14B8	Lock-in	Heptode	8X-L-0	Cathode	12.6	0.15	0.2m	10.0	9.0	Converter Characteristics Same as Type 7B8.										14B8
14C5	Lock-in	Beam Amp.	6AA-L-0	Cathode	12.6	0.225	0.4	9.5	9.0	Power Amp. Characteristics Same as Type 7C5.										14C5
14C7	Lock-in	Pentode	8V-L-5	Cathode	12.6	0.15	.004m	6.0	6.5	R-F Amp. 100 1.0 100 100 5.7 1.8 400,000 2,975 0.7 1.0 Meg. 14C7										14C7
14E6	Lock-in	Duodiode Tri.	8W-L-7	Cathode	12.6	0.15	1.5	3.0	2.4	Det. Amp. Characteristics Same as Type 7E6.										14E6
14E7	Lock-in	Duodi. Pent.	8AE-L-7	Cathode	12.6	0.15	.005m	4.6	5.5	Det. Amp. Characteristics Same as Type 7E7.										14E7
14F7	Lock-in	Duodiode	8AC-L-0	Cathode	12.6	0.15	1.6#	2.4#	2.0#	Amplifier Characteristics Same as Type 7F7.										14F7
14F8	Lock-in	Duodiode	8BW-L-0	Cathode	12.6	0.15	1.2#	2.8#	1.4#	Osc. Amp. Characteristics Same as Type 7F8.										14F8
14H7	Lock-in	Pentode	8V-L-5	Cathode	12.6	0.15	.004m	8.0	7.0	R-F Amp. Characteristics Same as Type 7H7.										14H7
14J7	Lock-in	Tri. Heptode	8BL-L-7	Cathode	12.6	0.15	0.03m	4.6	7.5	Mixer Osc. Characteristics Same as Type 7J7.										14J7
14N7	Lock-in	Duodiode	8AC-L-0	Cathode	12.6	0.30	.....	See 7N7	.....	Amplifier Characteristics Same as Type 7N7.										14N7
14O7	Lock-in	Heptode	8AL-L-0	Cathode	12.6	0.15	0.15m	9.0	9.0	Converter Characteristics Same as Type 7O7.										14O7
14R7	Lock-in	Duodi. Pent.	8AE-L-7	Cathode	12.6	0.15	.004m	5.6	5.3	Det. Amp. Characteristics Same as Type 7R7.										14R7
14S7	Lock-in	Tri. Heptode	8BL-L-7	Cathode	12.6	0.15	.03m	5.0	8.0	Mixer Osc. Characteristics Same as Type 7S7.										14S7
14W7	Lock-in	Pentode	8BL-L-5	Cathode	12.6	0.225	.005m	9.5	7.0	R-F Amp. Characteristics Same as Type 7V7, Except Capacitances.										14W7
14X7	Lock-in	Duodiode Tri.	8BZ-L-4	Cathode	12.6	0.15	.....	.....	.....	Det. Amp. Characteristics Same as Type 7X7.										14X7
14Y4	Lock-in	Duodiode	5AB-L-0	Cathode	12.6	0.30	.....	.....	.....	F-W Rect. 325 A-C Volts Per Plate, RMS, 70 Ma. Output Current. Condenser Input to Filter. 450 A-C Volts Per Plate, RMS, 70 Ma. Output Current. Choke Input to Filter.										14Y4
15	ST-12	Pentode	5F-0-4	Cathode	2.0	0.22	.01m	2.4*	8.0*	R-F Amp. 67.5 1.5 67.5 1.85 0.3 630,000 710 450 600 15										15
18	ST-14	Pentode	6B-0-0	Cathode	14.0	0.30	.....	.....	.....	Power Amp. Characteristics Same as Type 6F6G.										18
19	ST-12	Duodiode	6C-0-0	Filament	2.0	0.26	.....	.....	.....	Power Amp. 135 3.0 135 3.0 5.0 10,000 1,900 2,100 1,000 19										19
19AQ5	T-5½	Beam Amp.	7BZ	Cathode	18.9	0.15	.....	.....	.....	Power Amp. Same as 6AQ5.										19AQ5
19BG6G	ST-16	Beam Amp.	5BT-0-0	Cathode	18.9	0.30	0.65*	11.0*	6.5*	Characteristics Same as Type 6BG6G.										19BG6G
19C8	T-6½	Triode	9E-0-0	Cathode	18.9	0.15	.....	.....	.....	Det. Amp. 100 1.0 80,000 1,250 100 19C8										19C8
19J6	Miniature	Duodiode	7BF-0-0	Cathode	18.9	0.15	1.5* 1.5* 2.0*	2.0* 2.0* 0.4*	0.4*	Mixer # 150 Self 4.8 10,200 1,900 (Rk = 810 Ohms) 19J6										19J6
19T8	T-6½	Triode	9E-0-3 & 7	Cathode	18.9	0.15	2.4*	1.5*	1.1*	Det. Amp. Characteristics Same as Type 6T8.										19T8
19V8	T-6½	Triode	9AH-0-3	Cathode	18.9	0.15	.....	.....	.....	Det. Amp. 100 1.0 54,000 1,300 70 19V8										19V8
19X8	T-6½	Tri. Pentode	9AK	Cathode	18.9	0.15	.....	.....	.....	Osc. Mix. Same as 6X8.										19X8
20	T-8	Triode	4D-0-0	Filament	3.3	0.132	.....	.....	.....	Power Amp. 90 16.5 7,800 450 3.5 9,600 50 20										20
22	ST-14	Tetrode	4K-0-3	Filament	3.3	0.132	.02m	4.0*	10.0*	R-F Amp. 135 1.5 67.5 3.7 1.3 250,000 500 125 22										22
24A	ST-14	Tetrode	5E-0-3	Cathode	2.5	1.75	.007m	5.3	10.5	R-F Amp. 180 3.0 90 4.0 1.7 400,000 1,000 400 24A										24A
24S	ST-14	Tetrode	5E-4-3	Cathode	2.5	1.75	.....	.....	.....	Detector 250* 5.0* 20 to 45 (Plate Current to be adjusted to 0.1 Ma. with no Input Signal.) 24S										24S
25A6	Metal	Pentode	7S-1-0	Cathode	25.0	0.30	.....	.....	.....	Power Amp. Characteristics Same as Type 25A6GT.										25A6
25A6GT	GT	Pentode	7S-0-0	Cathode	25.0	0.30	.....	.....	.....	Power Amp. 95 15.0 95 20.0 4.0 45,000 9,000 4,500 2,000 25A6GT										25A6GT

# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction		Emitter		Note (*) (†) Capacitances in $\mu\text{f}$ .		Use	Plate Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type
	Bulb Size or Style	Class	Type	Volts	Amps.	Csp.	Cin.										
25A7GT	GT	Diode Pent.	Cathode	25.0	0.30	.....	.....	H-W Rect. Power Amp. 100 15.0 20.5	117 A-C Volts Per Plate, RMS, 75 Ma. Output Current, 4.0	.....	.....	50,000	1,800	.....	4,500	770	25A7GT
25A5GT	GT	Triode	Cathode	25.0	0.30	.....	.....	Power Amp. 110 15 45.0 Coupled Amp. 165 Bias from 6AE5GT/G 46.0 Dynamic Coupled with 6AE5GT Driver.	.....	.....	.....	15,200 3,800	.....	58	2,000	2,000	25A5GT
25AV5GT	GT	Pentode	Cathode	25.0	0.3	.....	.....	Horiz. Amp. 105 16.0 105 48.0	Characteristics Same as Type 6AV5GT.	.....	.....	15,500	4,800	.....	1,700	2,400	25AV5GT
25AX4GT	T-9	Diode	Cathode	25.0	0.3	.....	.....	Damper 100 20.0 135 62.0	P.I.V. = 4,000 Volts Max. D.C. Plate Current = 125 Ma. Max.	.....	.....	18,000	5,000	.....	2,500	7,100	25AX4GT
25B5	ST-12	Duobiode	Cathode	25.0	0.30	.....	.....	Power Amp. 105 16.0 105 48.0	Characteristics Same as Type 25N6G.	.....	.....	15,500	4,800	.....	1,700	2,400	25B5
25B6G	ST-14	Pentode	Cathode	25.0	0.30	.....	.....	Power Amp. 100 20.0 135 62.0	.....	.....	.....	15,500	4,800	.....	1,700	2,400	25B6G
25B8GT	GT	Pentode Tri.	Cathode	25.0	0.15	.02 2.2	5.5 5.0	Pent. Amp. 100 3.0 100 7.6	.....	.....	.....	185,000	2,000	370	.....	.....	25B8GT
25BK5	T-6½	Beam Amp.	Cathode	25	0.3	0.6	13	Tri. Amp. 100 1.0	Same as 6BK5.	.....	.....	75,000	1,500	112.5	.....	.....	25BK5
25BQ6GA	T-11	Beam Amp.	Cathode	25.0	0.3	0.6*	15.0*	Power Amp. 105 16.0 105 48.0	Characteristics and Ratings Same as Type 6BQ6G.	.....	.....	15,500	4,800	.....	1,700	2,400	25BQ6GA
25BQ6GT	GT	Beam Amp.	Cathode	25.0	0.3	0.6*	15.0*	Horiz. Amp. 100 20.0 135 62.0	Characteristics Same as Type 6BQ6GT.	.....	.....	15,500	4,800	.....	1,700	2,400	25BQ6GT
25C6G	ST-14	Beam Amp.	Cathode	25.0	0.30	.....	.....	Power Amp. 100 1.0 100 0.5	Characteristics Same as Type 6Y6G.	.....	.....	91,000	1,100	100	.....	.....	25C6G
25D8GT	GT	Diode Triode Beam Amp.	Cathode	25.0	0.15	2.5* .015m	3.7* 5.2	Det. Amp. 100 3.0 100 8.5	.....	.....	.....	200,000	1,900	.....	.....	.....	25D8GT
25L6	Metal	Beam Amp.	Cathode	25.0	0.30	0.3	16.0	Power Amp. 100 3.0 100 8.5	Characteristics Same as Type 25L6GT.	.....	.....	200,000	1,900	.....	.....	.....	25L6

(1) Values are given shielded unless marked with (\*).

(2) Converter tube capacitances given are signal grid to plate;

RF Input, Mixer Output.

(3) Has special mechanical and/or life characteristics.

§ With Average Power Input of 390 Mw. Grid to Grid.

†† For two tubes with 40 volts RMS applied to each grid.

\* Applied through 20,000 ohms.

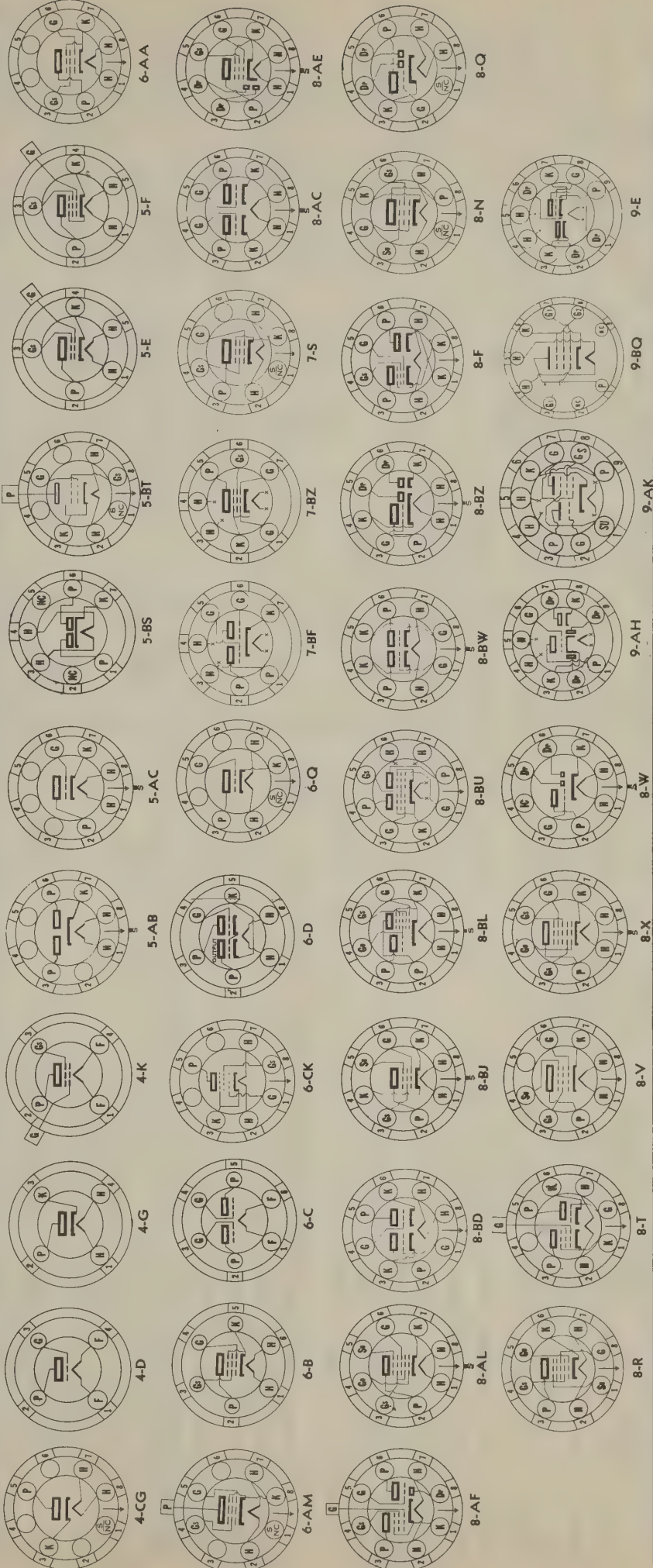
† Per Tube or Section.

§ Plate and Target Supply Voltage.

□ Pentode Operation.

▲ Conversion Transconductance.

♦ Approximate.



SYMBOLS FOR BASE DIAGRAMS:

A—Anode, A1—Anode 1, A2—Anode 2, D1—Deflector 1, D2—Deflector 2, F—Filament, Fc—Filament Center, G—Control Grid, Gm—Modulator Grid, Go—Oscillator Grid, Gq—Quadrature Grid, Gs—Screen Grid, H—Heater, Hc—Heater Center, Ht—Heater Tap, IC—Internal Connection, J—Jump, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, Su—Suppressor Grid, T—Target, XS—External Shield, □—Top Cap, →—Locating Pin.

# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction		Emitter		Note (1) (?) Capacitances in $\mu\text{f.}$			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milliwatts	Type
	Bulb Size or Style	Class	Base	Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout									
Now Known as Type 1B5																			
25L6GT	GT	Beam Amp.	7S-0-0		Cathode	25.0	0.30	0.8*	15.0*	10.0*	110	49.0	4.0	13,000	9,000	.....	2,000	2,100	25L6GT
25N6G	ST-12	Duotriode	7W-0-0		Cathode	25.0	0.30	.....	.....	.....	110	45	7.0	(Direct Coupled)	2,900	.....	2,000	2,000	25N6G
25S																			
25W4GT	GT	Diode	4CG-0-0		Cathode	25	0.30	.....	.....	.....	350 A-C Volts RMS, 125 Ma. D-C Output.	50	4.0	13,000	9,000	.....	2,000	2,100	25W4GT
25W6GT	T-9	Beam Amp.	7S		Cathode	25.0	0.15	.....	.....	.....	295** -30	29**	.....	1,600**	3,800**	6.9**	.....	2,000	25W6GT
25X6GT	GT	Duotriode	7Q-0-0		Cathode	25.0	0.30	.....	.....	.....	125 Volts RMS Per Plate, 60 Ma. D-C Output Per Plate.	.....	.....	.....	.....	.....	.....	2,000	25X6GT
25Y5	ST-12	Duotriode	6E-0-0		Cathode	25.0	0.30	.....	.....	.....	117 A-C Volts Per Plate, RMS, 75 Ma. Output Current.	.....	.....	.....	.....	.....	.....	2,000	25Y5
25Z4	Metal	Diode	5AA-1-0		Cathode	25.0	0.30	.....	.....	.....	117 A-C Volts Per Plate, RMS, 125 Ma. Output Current.	.....	.....	.....	.....	.....	.....	2,000	25Z4
25Z5	ST-12	Duotriode	6E-0-0		Cathode	25.0	0.30	.....	.....	.....	117 A-C Volts Per Plate, RMS, 125 Ma. Output Current.	.....	.....	.....	.....	.....	.....	2,000	25Z5
25Z6	Metal	Duotriode	7Q-1-0		Cathode	25.0	0.30	.....	.....	.....	117 A-C Volts Per Plate, RMS, 75 Ma. Output Current.	.....	.....	.....	.....	.....	.....	2,000	25Z6
25Z6GT	GT	Duotriode	7Q-0-0		Cathode	25.0	0.30	.....	.....	.....	117 A-C Volts Per Plate, RMS, 75 Ma. Output Current.	.....	.....	.....	.....	.....	.....	2,000	25Z6GT
26	ST-14	Triode	4D-0-0		Filament	1.5	1.05	8.1*	2.8*	2.5*	90	2.9	.....	8,900	935	8.3	.....	.....	26
26A6	Miniature	Pentode	7BK-0-2		Cathode	26.5	0.07	.0035	6.0	5.0	135	10.0	5.5	7,600	1,100	8.3	.....	.....	26A6
26A7GT	GT	Duo. Beam Amplifier	8BU-0-0		Cathode	26.5	0.6	1.2*	16.0*	13.0*	90	2.9	.....	8,900	935	8.3	.....	200#	26A7GT
26BK6	Miniature	Duotriode Tri.	7BT-0-2		Cathode	26.5	0.07	.....	.....	.....	100	1.0	0.5	80,000	1,250	100	.....	.....	26BK6
26C6	Miniature	Duotriode Tri.	7BT-0-0		Cathode	26.5	0.07	2.0	1.8	1.4	90	2.9	.....	8,900	935	8.3	.....	.....	26C6
26CG6	Miniature	Pentode	7BK-0-2		Cathode	26.5	0.07	.008m	5.0	5.0	100	1.0	0.5	80,000	1,250	100	.....	.....	26CG6
26D6	Miniature	Heptode	7CH-0-0		Cathode	26.5	0.07	0.3	7.5	14.0	100	1.5	3.0	10,000	900	9.0	.....	.....	26D6
27	ST-12	Triode	5A-0-0		Cathode	2.5	1.75	3.3*	3.2*	2.3*	90	2.9	.....	8,900	935	8.3	.....	.....	27
27S	Lock-in	Duo. Beam Amplifier	8BS-L-0		Cathode	28.0	0.40	.....	.....	.....	135	9.0	4.7	10,000	900	9.0	.....	.....	27S
28D7	Lock-in	Duo. Beam Amplifier	8BS-L-0		Cathode	28.0	0.40	.....	.....	.....	180	13.5	5.0	9,000	1,000	9.0	.....	.....	28D7
28D7W (3)	Lock-in	Double Diode	6BJ-L-0		Cathode	28.0	0.24	.....	.....	.....	28	3.5	1.2	4,200	3,400	.....	4,000	80	28D7
28Z5	Lock-in	Triode	4D-0-0		Filament	2.0	0.06	6.0*	3.0*	2.1*	90	2.9	.....	8,900	935	8.3	.....	.....	28Z5
30	ST-12	Triode	4D-0-0		Filament	2.0	0.13	.....	.....	.....	135	9.0	4.7	10,000	900	9.0	.....	.....	30
31	ST-12	Triode	4D-0-0		Filament	2.0	0.13	.....	.....	.....	135	9.0	4.7	10,000	900	9.0	.....	.....	31
32	ST-14	Tetrode	4K-0-3		Filament	2.0	0.06	.015m	5.3*	10.5*	135	9.0	4.7	10,000	900	9.0	.....	.....	32
32L7GT	GT	Diode Beam Amplifier	8Z-0-0		Cathode	32.5	0.30	.....	.....	.....	180	13.5	5.0	9,000	1,000	9.0	.....	.....	32L7GT
33	ST-14	Pentode	5K-0-0		Filament	2.0	0.26	1.0*	8.0*	12.0*	135	9.0	4.7	10,000	900	9.0	.....	.....	33
34	ST-14	Pentode	4M-0-4		Filament	2.0	0.06	.015m	6.0*	11.0*	135	9.0	4.7	10,000	900	9.0	.....	.....	34
35/51	ST-14	Tetrode	5E-0-3		Cathode	2.5	1.75	.007m	5.3*	10.5*	180	13.5	5.0	9,000	1,000	9.0	.....	.....	35/51
35/51S	Lock-in	Beam Amp.	6AA-L-0		Cathode	35.0	0.15	.....	.....	.....	110	7.5	11.0	40,000	5,800	.....	2,500	1,500	35/51S
35A5	Miniature	Beam Amp.	7BZ-0-0		Cathode	35.0	0.15	0.4*	11.0*	6.5*	110	7.5	11.0	40,000	5,800	.....	2,500	1,500	35A5
35B5	Miniature	Beam Amp.	7CV-0-0		Cathode	35.0	0.15	0.57*	12.0*	6.2*	110	7.5	11.0	40,000	5,800	.....	2,500	1,500	35B5
35L6GT	GT	Beam Amp.	7S-0-0		Cathode	35.0	0.15	0.8*	13.0*	9.5*	110	7.5	11.0	40,000	5,800	.....	2,500	1,500	35L6GT
35W4	Miniature	Diode	5BQ-0-0		Cathode	35.0	0.15	.....	.....	.....	110	7.5	11.0	40,000	5,800	.....	2,500	1,500	35W4
35Y4	Lock-in	Diode	5AL-L-0		Cathode	35.0	0.15	.....	.....	.....	110	7.5	11.0	40,000	5,800	.....	2,500	1,500	35Y4
35Z3	Lock-in	Diode	4Z-L-0		Cathode	35.0	0.15	.....	.....	.....	110	7.5	11.0	40,000	5,800	.....	2,500	1,500	35Z3

# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (?) Capacitances in $\mu\text{f.}$			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type	
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Csp.	Cin.	Cout													
35Z4GT	GT	Diode	5A-0-0	Cathode	35.0	0.15	.....	.....	.....	H-W Rect.	117 A-C Volts, RMS, 100 Ma. Output Current.	.....	.....	.....	.....	.....	.....	.....	.....	.....	35Z4GT	
35Z5GT	GT	Diode	6AD-0-0	Cathode	35.0	0.15	.....	.....	.....	H-W Rect.	Characteristics Same as Type 35Y4.	.....	.....	.....	.....	.....	.....	.....	.....	.....	35Z5GT	
35Z6G	ST-14	Duodiode	7Q-0-0	Cathode	35.0	0.30	.....	.....	.....	Doubler	117 A-C Volts Per Plate, RMS, 110 Ma. Output Current.	.....	.....	.....	.....	.....	.....	.....	.....	.....	35Z6G	
36	ST-12	Tetrode	5E-0-3	Cathode	6.3	0.30	.007m	3.7*	9.2*	R-F Amp.	235 A-C Volts Per Plate, RMS, 110 Ma. Output Current Per Plate.	135	1.5	67.5	2.8	Not Over	575,000	1,000	475	.....	36	
										Detector	180	3.0	90.0	3.1	$\frac{1}{2}$ of	500,000	1,050	595	.....	37		
											250	3.0	90.0	3.2	Plate Ma.	550,000	1,080	595	.....			
37	ST-12	Triode	5A-0-0	Cathode	6.3	0.30	2.0*	3.5*	9.9*	Amplifier	(Plate Current to be adjusted to 0.1 Ma. with no Input Signal.)	135	9.0	.....	4.1	.....	10,000	925	9.2	.....	37	
												180	13.5	.....	4.3	.....	10,200	900	9.2	.....		
												250	18.0	.....	7.5	.....	8,400	1,100	9.2	.....		
38	ST-12	Pentode	5F-0-0	Cathode	6.3	0.30	0.3*	3.5*	7.5*	Power Amp.		135	13.5	135	9.0	1.5	130,000	995	190	13,500	38	
												180	18.0	180	14.0	2.4	110,000	1,050	180	11,800		
												250	25.0	250	22.0	3.8	100,000	1,200	120	10,000		
39/44	ST-12	Pentode	5F-0-4	Cathode	6.3	0.30	.007m	3.5*	10.0*	R-F Amp.		90	3.0	90.0	5.6	1.6	375,000	960	360	.....	39/44	
												180	3.0	90.0	5.8	1.4	750,000	1,000	750	.....		
												250*	3.0	90.0	5.8	1.4	1 Meg.	1,050	1,050	.....		
40	ST-14	Triode	4D-0-0	Filament	5.0	0.25	8.0	2.8	2.2	A-F Amp.		135	1.5	.....	0.2	.....	300	30	.....	40		
												180	3.0	.....	0.2	.....	150,000	200	30	.....		
												.....	.....	.....	.....	.....	.....	.....	.....	.....		
40A1	T-9	Ballast	8ES	.....	.....	.....	.....	.....	.....	Horiz. Reg.	Avg. Operating Current—0 Ma. at 20 Volts; 150 Ma. at 40 Volts; 155 Ma. at 60 Volts.	.....	.....	.....	.....	.....	.....	.....	40A1			
40B2	T-9	Ballast	8ES	.....	.....	.....	.....	.....	.....	Horiz. Reg.	Avg. Operating Current—140 Ma. at 20 Volts; 150 Ma. at 40 Volts; 155 Ma. at 60 Volts.	.....	.....	.....	.....	.....	.....	.....	40B2			
40Z5/45Z5GT	GT	Diode	6AD-0-0	Cathode	45.0	0.15	.....	.....	.....	H-W Rect.	Characteristics Same as Type 35Y4.	.....	.....	.....	.....	.....	.....	.....	.....	.....	40Z5/45Z5GT	
41	ST-12	Pentode	6B-0-0	Cathode	6.3	0.40	.....	.....	.....	Power Amp.	Characteristics Same as Type 6K6GT.	.....	.....	.....	.....	.....	.....	.....	.....	.....	41	
42	ST-14	Pentode	6B-0-0	Cathode	6.3	0.65	.....	.....	.....	Power Amp.	Characteristics Same as Type 6F6G.	.....	.....	.....	.....	.....	.....	.....	.....	.....	42	
43	ST-14	Pentode	6B-0-0	Cathode	25.0	0.30	.....	.....	.....	Power Amp.	Characteristics Same as Type 25A6GT.	.....	.....	.....	.....	.....	.....	.....	.....	.....	43	
45	ST-14	Triode	4D-0-0	Filament	2.5	1.50	7.0*	4.0*	3.0*	Power Amp.	.....	180	31.5	.....	31.0	.....	1,650	2,125	3.5	2,700	830	45
												250	50.0	.....	34.0	.....	1,610	2,175	3.5	3,900	1,600	
												275	56.0	.....	36.0	.....	1,700	2,050	3.5	4,600	2,000	
45Z3	Miniature	Diode	5AM-0-0	Cathode	45.0	0.075	.....	.....	.....	H-W Rect.	117 A-C Volts Per Plate, RMS, 65 Ma. Output Current.	.....	.....	.....	.....	.....	.....	.....	.....	.....	45Z3	
45Z5GT	Now Known as Type 40Z5/45Z5GT																					45Z5GT

(1) Values are given shielded unless marked with (\*).

(2) Converter tube capacitances given are signal grid to plate, RF Input, Mixer Output.

(3) Has special mechanical and/or life characteristics.

(4) With Average Power Input of 350 Mw. Grid to Grid.

(5) For two tubes with 40 volts RMS applied to each grid.

\* Applied through 250,000 ohms.

† Per Tube or Section.

‡ Plate and Target Supply Voltage.


□ Conversion Transconductance.

• Triode Operation.


† Pentode Operation.

‡ Plate to Plate.


• Approximate.




4-CG



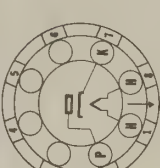
4-D




4-K




4-M



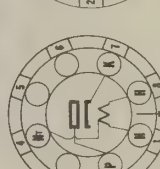
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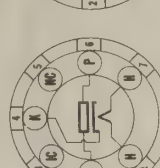
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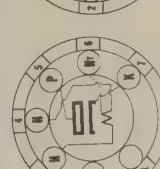
5-AA




5-AL




5-AM




5-BQ




5-E




6-B



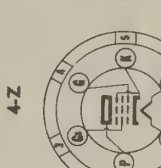
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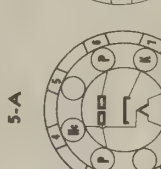
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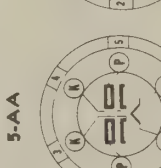
6-BJ




6-E



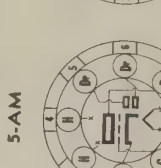
6-BT




6-ES



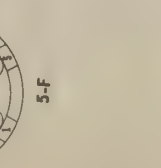
6-BS



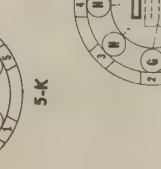
6-BA



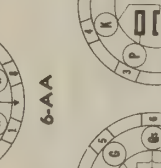
6-CH



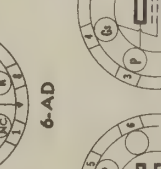
7-CV




7-Q




7-S



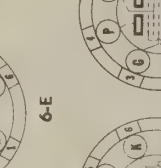
7-W



7-BU



7-BZ



7-CH

**SYMBOLS FOR BASE DIAGRAMS:**

A—Anode; A1—Anode 1; A2—Anode 2; D1—Deflector; Dp—Diode Plate; F—Filament; Fc—Filament Center; G—Control Grid; Gm—Modulator Grid; Go—Oscillator Grid; Gq—Quadrature Grid; Gs—Screen Grid; H—Heater; Hc—Heater Center; Hh—Heater Tap; IC—Internal Connection; J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode; Su—Suppressor Grid; T—Target; X5—External Shield; □—Top Cap; —> Locating Pin.

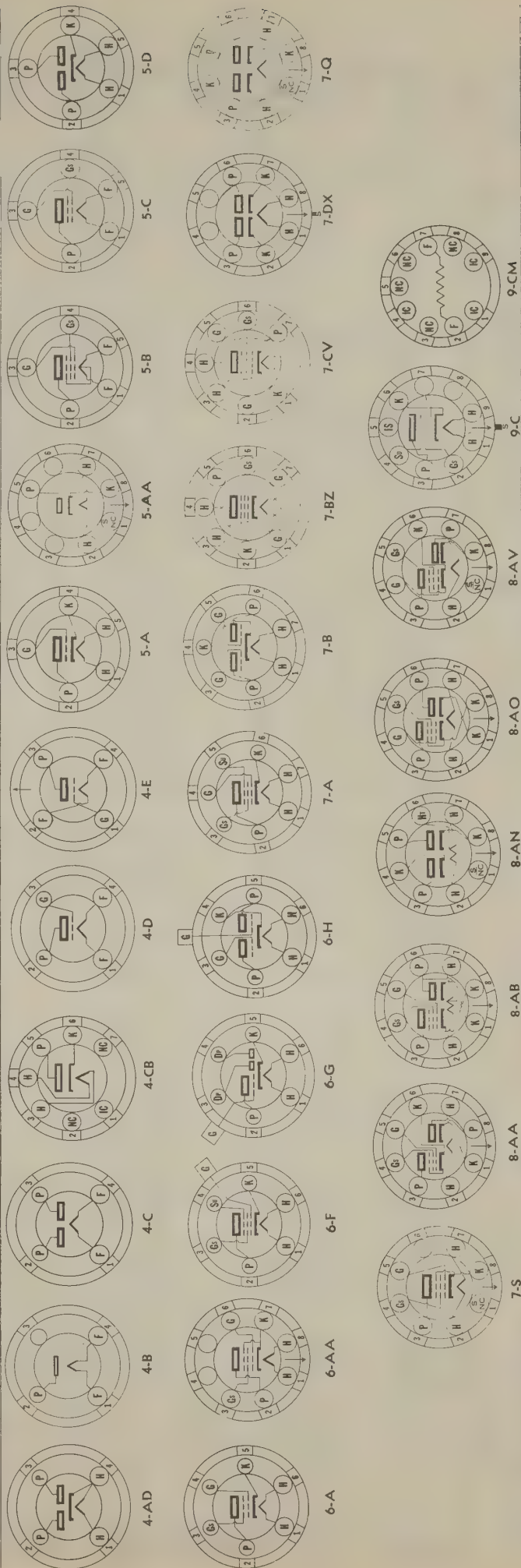
# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter		Note (1) (?) Capacitances in $\mu\text{f.}$			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type	
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.													Coat
46	ST-16	Dual Grid Triode	5C-0-0	Filament	2.5	1.75	....	....	....	Power Amp.	250 300 400	Tie Gs to P Tie Gs to G Tie Gs to G	22.0 4.0# 6.0#	....	....	2,380 (Class B Operation)	2,350 (Class B Operation)	5.6	6,400 5,200# 5,800#	1,250 16,000# 20,000#	46
47	ST-16	Pentode	5B-0-0	Filament	2.5	1.75	1.2*	8.6*	1.3*	Power Amp.	250	16.5	250	6.0	60,000	2,500	150	7,000	2,700	47	
48	ST-16	Tetode	6A-0-0	Cathode	30.0	0.40	....	....	....	Power Amp.	95 125	20.0 22.5	52.0 100	12.0 12.0	4,000 11,000	3,900 3,900	15.6 43	1,500 1,500	2,000 3,000	48	
49	ST-14	Dual Grid Triode	5C-0-0	Filament	2.0	0.12	....	....	....	Power Amp.	135 180	Tie Gs to P Tie Gs to G	6.0 2.0#	....	....	4,175 (Two Tubes Class B Operation)	1,195 (Two Tubes Class B Operation)	4.7	11,000 12,000#	170 3,500	49
50	ST-16	Triode	4D-0-0	Filament	7.5	1.25	7.1*	4.2*	3.4*	Power Amp.	300 350 400 450	54.0 63.0 70.0 84.0	35.0 45.0 55.0 55.0	....	....	2,000 1,900 1,800 1,800	1,900 2,000 2,100 2,100	3.8 3.8 3.8 3.8	4,600 4,100 3,670 4,350	1,600 2,400 3,400 4,600	50
50A1	T-6½	Ballast	9CM	....	....	....	....	....	....	Fil. Ballast	110 200	7.5 8.0	110 50.0	4.0 1.5	10,000# 35,000#	8,200 8,250	....	2,000 3,000	2,100 4,300	50A1	
50A3	Lock-in	Beam Amp.	6AA-L-0	Cathode	50.0	0.15	....	....	....	Power Amp.	110 200	7.5 8.0	110 50.0	4.0 1.5	10,000# 35,000#	8,200 8,250	....	2,000 3,000	2,100 4,300	50A3	
50AX6G	ST-14	Duodiode	7Q-0-0	Cathode	50.0	0.3	....	....	....	F-W Rect.	110 200	7.5 8.0	110 50.0	4.0 1.5	10,000# 35,000#	8,200 8,250	....	2,500 3,000	1,900 4,300	50AX6G	
50B5	Miniature	Beam Amp.	7BZ-0-0	Cathode	50.0	0.15	0.5*	13.0*	6.5*	Power Amp.	110	7.5	110	4.0	14,000#	7,500	....	2,500	1,900	50B5	
50C3	Miniature	Beam Amp.	7CV-0-0	Cathode	50.0	0.15	0.64*	13.0*	6.1*	Power Amp.	110	7.5	110	4.0	10,000	7,500	....	2,500	1,900	50C3	
50C6G	ST-14	Beam Amp.	7S-0-0	Cathode	50.0	0.15	....	....	....	Power Amp.	110	7.5	110	4.0	10,000	7,500	....	2,500	1,900	50C6G	
50L6GT	GT	Beam Amp.	7S-0-0	Cathode	50.0	0.15	....	....	....	H-W Rect. Doubler	117	7.5	117	4.0	10,000	7,500	....	2,500	1,900	50L6GT	
50X6	Lock-in	Duodiode	7DX-L-0	Cathode	50.0	0.15	....	....	....	F-W Rect.	117	7.5	117	4.0	10,000	7,500	....	2,500	1,900	50X6	
50Y6GT	GT	Duodiode	7Q-0-0	Cathode	50.0	0.15	....	....	....	F-W Rect.	117	7.5	117	4.0	10,000	7,500	....	2,500	1,900	50Y6GT	
50Y7GT	GT	Duodiode	8AN-0-0	Cathode	46.0	0.15	....	....	....	H-W Rect.	117	7.5	117	4.0	10,000	7,500	....	2,500	1,900	50Y7GT	
50Z6G	ST-12	Duodiode	7Q-0-0	Cathode	50.0	0.30	....	....	....	F-W Rect.	117	7.5	117	4.0	10,000	7,500	....	2,500	1,900	50Z6G	
50Z7G	ST-12	Duodiode	8AN-0-0	Cathode	50.0	0.15	....	....	....	Doubler	235	A-C Volts Per Plate, RMS, 65 Ma. Output Current. 235 A-C Volts Per Plate, RMS, 65 Ma. Output Current Per Plate.	....	....	....	....	....	....	....	50Z7G	
EF50	Metal Glass	Pentode	9C-L-5 & 8	Cathode	6.3	0.3	0.007m	8.0	5.0	R-F Amp.	250	Self	250	10.0	3.1	600,000	6,300	....	(Rk = 160 Ohms)	EF50	
52	ST-14	Dual Grid Triode	5C-0-0	Filament	6.3	0.30	....	....	....	Class A Amplifier Class B	110 180	0 0	43 1.5#	G <sub>2</sub> to P G <sub>1</sub> to G <sub>2</sub>	1,750 Two Tubes in P.P.	3,000	5.2	2,000# 10,000#	1,500 5,000	52	
VT52	S-17	Triode	4D-0-0	Filament	7.0	1.18	7.7	5.0	3.0	Amplifier	220	43.5	....	99.0	....	1,650	2,300	3.8	3,800	1,000	VT52
53	ST-14	Duodiode	7B-0-0	Cathode	2.5	2.0	....	....	....	Power Amp.	250	43.5	....	99.0	....	1,650	2,300	3.8	3,800	1,000	53
55	ST-12	Duodiode Tri.	6G-0-5	Cathode	2.5	1.0	1.5*	1.5*	4.3*	Det. Amp.	250	43.5	....	99.0	....	1,650	2,300	3.8	3,800	1,000	55
55S	ST-12	Triode	5A-0-0	Cathode	2.5	1.0	2.8*	3.5*	2.5*	Amplifier Detector	250	13.5 20.0#	....	5.0 (Plate Current to be adjusted to 0.2 Ma. with no Input Signal.)	....	9,500 1,450	13.8	....	....	55S	
56S	ST-12	Triode	5A-4-0	Cathode	2.5	0.40	....	....	....	Amplifier	250	13.5 20.0#	....	5.0 (Plate Current to be adjusted to 0.2 Ma. with no Input Signal.)	....	9,500 1,450	13.8	....	....	56S	
56AS	ST-12	Triode	5A-4-0	Cathode	2.5	0.40	....	....	....	Amplifier	250	13.5 20.0#	....	5.0 (Plate Current to be adjusted to 0.2 Ma. with no Input Signal.)	....	9,500 1,450	13.8	....	....	56AS	
57	ST-12	Pentode	6F-0-5	Cathode	2.5	1.00	0.007m	5.0*	6.5*	R-F Amp.	100 250	3.0 3.0	100 2.0	0.5 0.5	1 Meg. 1 Meg.	1,185 1,225	....	....	....	57	
57S	ST-12	Pentode	6F-5-5	Cathode	2.5	1.00	0.007m	5.0*	6.5*	Detector	250*	4.3#	100	0.5	1 Meg.	1,225	....	....	....	57S	
57AS	ST-12	Pentode	6F-5-5	Cathode	2.5	0.40	....	....	....	R-F Amp.	100	3.0	100	8.0	2.2	250,000	1,500	....	....	57AS	
58	ST-12	Pentode	6F-0-5	Cathode	2.5	1.00	0.007m	4.7*	6.0*	R-F Amp.	250	3.0	100	8.2	2.0	800,000	1,600	....	....	58	
58S	ST-12	Pentode	6F-5-5	Cathode	2.5	1.00	0.007m	4.7*	6.0*	R-F Amp.	250	3.0	100	8.2	2.0	800,000	1,600	....	....	58S	
58AS	ST-12	Pentode	6F-5-5	Cathode	2.5	0.40	....	....	....	R-F Amp.	250	3.0	100	8.2	2.0	800,000	1,600	....	....	58AS	
59	ST-16	Pentode	7A-0-0	Cathode	2.5	2.0	....	....	....	Power Amp.	250**	18.0 250**	Tie Gs to P Tie Gs to G	96.0 35.0	....	2,300 40,000	2,600 2,500	6.0 100	5,000 6,000 15,000#	1,250 3,000 4,000	59
70A7GT	GT	Diode Beam Amplifier	8AB-0-0	Cathode	70.0	0.15	....	....	....	H-W Rect. Power Amp.	110 110	7.5 7.5	110 40	3.0 3.0	5,800	5,800	....	2,500	1,500	70A7GT	
70L7GT	GT	Diode Beam Amplifier	8AA-0-0	Cathode	70.0	0.15	....	....	....	H-W Rect. Amplifier	117	7.5	110	3.0	15,000	7,500	....	2,000	1,800	70L7GT	
71A	ST-14	Triode	4D-0-0	Filament	5.0	0.25	7.5*	3.2*	2.9*	Power Amp.	90 135 180	16.5 27.0 40.5	10.0 17.3 20.0	....	....	2,170 1,820 1,750	1,400 1,650 1,700	3.0 3.0 3.0	3,000 3,000 4,800	195 400 790	71A
75	ST-12	Duodiode Tri.	6G-0-5	Cathode	6.3	0.30	1.7*	1.7*	3.8*	Det. Amp.	250	2.0	....	0.9	....	91,000	1,100	100	....	75	
75S	ST-12	Duodiode Tri.	6G-5-5	Cathode	6.3	0.30	1.7*	1.7*	3.8*	Det. Amp.	250	2.0	....	0.9	....	91,000	1,100	100	....	75S	
76	ST-12	Triode	5A-0-0	Cathode	6.3	0.30	2.8*	3.5*	2.5*	Amplifier Detector	250	13.5 20.0#	....	5.0 (Plate Current to be adjusted to 0.2 Ma. with no Input Signal.)	....	9,500 1,450	13.8	....	....	76	
77	ST-12	Pentode	6F-0-3	Cathode	6.3	0.30	0.007m	4.7*	11.0*	R-F Amp.	100 250	1.5 3.0	60.0 2.3	0.4 0.5	600,000# 1.0 Meg.	1,100 1,250	....	....	....	77	
78	ST-12	Pentode	6F-0-5	Cathode	6.3	0.30	0.007m	4.5*	11.0*	R-F Amp.	90 180 250	3.0 3.0 3.0	90.0 4.0 7.0	1.3 1.0 1.7	300,000# 1 Meg. 800,000#	1,275 1,100 1,450	....	....	....	78	
79	ST-12	Duodiode	6H-0-0	Cathode	6.3	0.60	....	....	....	Power Amp.	180 250	0.0 0.0	7.5# 10.5#	....	....	....	....	7,000# 14,000#	5,500 8,000	79	
80	ST-14	Duodiode	4C-0-0	Filament	5.0	2.00	....	....	....	F-W Rect.	350	A-C Volts Per Plate, RMS, 125 Ma. Output Current. 500 A-C Volts Per Plate, RMS, 125 Ma. Output Current.	....	....	....	....	....	....	....	80	

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction		Emitter		Note (1) (?) Capacitances in $\mu\mu\text{f}$ .		Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type
	Bulb Size or Style	Class	Base	Type	Volts	Amps.									
81	ST-16	Diode	4B-0-0	Filament	7.5	1.25	H-W Rect.	700 A-C Volts Per Plate, RMS, 85 Ma. Output Current.							81
82	ST-14	Duodiode	4C-0-0	Filament	2.5	3.0	F-W Rect.	450 A-C Volts Per Plate, RMS, 115 Ma. Output Current.							82
83	ST-16	Duodiode	4C-0-0	Filament	5.0	3.00	F-W Rect.	450 A-C Volts Per Plate, RMS, 295 Ma. Output Current.							83
83V	ST-16	Duodiode	4A-0-0	Cathode	5.0	2.00	F-W Rect.	375 A-C Volts Per Plate, RMS, 175 Ma. Output Current.							83V
84/6Z4	ST-12	Duodiode	5D-0-0	Cathode	6.3	0.50	F-W Rect.	325 A-C Volts Per Plate, RMS, 60 Ma. Output Current.							84/6Z4
85	ST-12	Duodiode Tri.	6G-0-5	Cathode	6.3	0.30	Det. Amp.	Characteristics Same as Type 6V7G.							85
85AS	ST-12	Duodiode Tri.	6G-5-5	Cathode	6.3	0.30	Det. Amp.	250 9.0							85AS
89	ST-12	Pentode	6F-0-0	Cathode	6.3	0.40	Power Amp.	160** 20.0 180† 18.0 180 0.0							89
VR-90-105-150				Cold			Now Listed as 0B3, OC3 and OD3.								VR-90-105-150
V-99	T-8	Triode	4E-0-0	Filament	3.3	0.063	Det. Amp.	90 4.5							V-99
X99	T-9	Triode	4D-0-0	Filament	3.3	0.063	Det. Amp.	90 4.5							X99
117L7/M7GT	GT	Diode Beam Amplifier	8AO-0-0	Cathode	117	0.09	H-W Rect.	117 A-C Volts, RMS, 75 Ma. Output Current.							117L7/M7GT
117N7GT	GT	Diode Beam Amplifier	8AV-0-0	Cathode	117	0.09	H-W Rect.	117 A-C Volts, RMS, 75 Ma. Output Current.							117N7GT
117P7GT	GT	Diode Beam Amplifier	8AV-0-0	Cathode	117	0.09	H-W Rect.	117 A-C Volts Per Plate, RMS, 75 Ma. Output Current.							117P7GT
117Z3	Miniature	Diode	4CB-0-0	Cathode	117	0.04	H-W Rect.	117 Volts Per Plate, RMS, 90 Ma. D-C Output.							117Z3
117Z4GT	GT	Diode	5AA-0-0	Cathode	117	0.04	H-W Rect.	117 A-C Volts Per Plate, RMS, 90 Ma. Output Current.							117Z4GT
117Z6GT	GT	Duodiode	7Q-0-0	Cathode	117	0.075	Volt. Dblr.	117 A-C Volts Per Plate, RMS, 60 Ma. Output Current.							117Z6GT
182B/482B	ST-14	Triode	4D-0-0	Filament	5.0	1.25	Power Amp.	250 35.0							182B/482B
183/483	ST-14	Triode	4D-0-0	Filament	5.0	1.25	Power Amp.	250 65.0							183/483
210-T	ST-16	Triode	4D-0-0	Filament	7.5	1.25	Power Amp.	250 9.0							210-T
485	ST-12	Triode	5A-0-0	Cathode	3.0	1.25	Det. Amp.	180 9.0							485
864	T-9	Triode	4D-0-0	Filament	1.1	0.25	Det. Amp.	90 4.5 135 9.0							864

(1) Values are given shielded unless marked with (\*).  
(2) Converter tube capacitances given are signal grid to plate;  
RF Input, Mixer Output.  
(3) Has special mechanical and/or life characteristics.  
\* Applied through 250,000 ohms.  
† Per Tube or Section.  
‡ Plate and Target Supply Voltage.



SYMBOLS FOR BASE DIAGRAMS:  
A—Anode; A1—Anode 1; A2—Anode 2; D1—Deflector 1; D2—Deflector 2; F—Filament; Fc—Filament Center; G—Control Grid; Gm—Modulator Grid; Go—Oscillator Grid;  
Ga—Quadrature Grid; Gs—Screen Grid; H—Heater; Hc—Heater Center; Ht—Heater Tap; IC—Internal Connection; J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode;  
Su—Suppressor Grid; T—Target; XS—External Shield; □—Top Cap; —>—Locating Pin.

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# SYLVANIA TUBES - AVERAGE CHARACTERISTICS

Type	Construction		Emitter		Note (1) (2) Capacitances in $\mu\mu\text{f}$ .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Plate Resistance Ohms	Transcon- ductance Micromhos	Ampli- fication Factor	Ohms Load for Stated Power Output	Undis- torted Power Output Milli- watts	Type		
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Csp.												Cin.	Cout
884	ST-12	Gas Triode	6Q-0-0	Cathode	6.3	0.6	6.0*	2.0*	0.6*	300	30	75	For Relay Operation Limit Time to 30 Secs. 300 Ma. Peak Current. 16 Volt Tube Drop.						884	
885	ST-12	Gas Triode	5A-0-0	Cathode	2.5	1.5	6.0*	2.0*	0.6*	Characteristics Same as Type 884.										885
950	ST-14	Pentode	3K-0-0	Filament	2.0	0.12				135	16.5	135	2.0	125,000	1,000	125	13,500	575	950	
954	Acorn	Pentode	58B-0-0	Cathode	6.3	0.15	0.007m	3.4	3.0	250	3.0	90	0.5	1 Meg.	1,100				954	
955	Acorn	Triode	58C-0-0	Cathode	6.3	0.15	1.4	1.0	0.6	250	7.0	6.3		11,400	2,200	25			955	
956	Acorn	Pentode	58B-0-0	Cathode	6.3	0.15	0.007m	3.4	3.0	250	3.0	100	6.7	700,000*	1,800				956	
957	Acorn	Triode	58D-0-0	Filament	1.2	0.05	1.2	0.3	0.7	135	5.0	2.0		20,800*	650	13.5			957	
958-A	Acorn	Triode	58D-0-0	Filament	1.25	0.10	2.6	0.6	0.8	135	7.5	3.0		10,000	1,200	12			958-A	
959	Acorn	Pentode	58E-0-0	Filament	1.25	0.05	0.015m	1.8	2.5	135	3.0	67.5	1.7	4	800,000*	600			959	
FM1000	Lock-in	Heptode	FM1000	Cathode	6.3	0.30													FM1000	
1005/CK1005	Metal	Gas Duodi.	5AQ-0-1	Filament	6.3	0.1				450 Max. Peak Inverse V., 210 Ma. Max. Peak Current, 70 Ma. Avg. Current D-C. Avg. Tube Drop = 20.										1005/CK1005
1201	Now Known as Type 7E5																			1201
1203-A	Now Known as Type 7C4																			1203-A
1204	Now Known as Type 7AB7																			1204
1206	Now Known as Type 7G8																			1206
1221	ST-12	Pentode	6F-0-5	Cathode	6.3	0.30				Special Non-Microphonic Tube, Characteristics Same as Type 6C6.										1221
1223	ST-12	Pentode	7R-0-0	Cathode	6.3	0.30				"G" Equivalent of Type 1221 Above.										1223
1229	ST-12	Tetode	4K-0-0	Filament	2.0	0.06				Special Type 32. Made for Low Grid Current Application.										1229
1230	T-9	Triode	4D-0-0	Filament	2.0	0.06	6.0*	3.0*	2.1*	Special Type 30. Made for Low Grid Current Applications.										1230
1231	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.45	.015m	8.5	6.5	300	Self	150	10.0	2.5	700,000	5,500	3,850	(Rk = 200 Ohms)	1231	
										300	Self	150	12.0	0.5	540,000	6,500	3,500	(Rk = 800 Ohms)		
1232	Now Known as Type 7G7																			1232
1247	T-3	Diode	1247	Filament	0.7	0.065				300 A-C Volts RMS, 0.4 Ma. D-C Plate Current.										1247
1265	ST-12	Diode	4AJ-0-0	Cold Cathode						Starting Voltage = 135, Operating Voltage = 90, Operating Current = 5 to 30 Ma.										1265
1266	GT	Diode	4AJ-0-0	Cold K						Voltage Regulator Similar to Type OB3/VR-90-30, Except Regulating at 70 Volts.										1266
1267	GT	Gas Triode	4V-0-0	Cold K						Similar to Type OA4G.										1267
1273	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.30	.004m	6.0	6.5	Characteristics Same as Type 14C7 (Special Non-Microphonic Tube)										1273
1274	GT	Duodiode	6S-0-0	Cathode	6.3	0.60				Characteristics Same as Type 7Y4.										1274
1275	ST-16	Duodiode	4C-0-0	Filament	5.0	1.75				F-W Rect. Similar to Type 5Z3.										1275
1276	ST-16	Triode	4D-0-0	Filament	4.5	1.14				Power Amp. Similar to Type 6A3.										1276
1280	Lock-in	Pentode	8V-L-5	Cathode	12.6	0.15	.004m	6.0	6.5	Characteristics Same as Type 14C7 (Special Non-Microphonic Tube).										1280
1284	Lock-in	Pentode	8V-L-5	Cathode	12.6	0.15	0.01	5.0	6.0	250	3	100	9.0	2.5	800,000	200			1284	
1291	Now Known as Type 3B7																			1291
1293	Lock-in	Triode	4AA-L-0	Filament	1.4	.11	1.7	1.7	3.0	90	0	5.2	120 Mc. Oscillator Rg = 10,000 Ohms.	15					1293	
1299	Now Known as Type 1R4																			1299
1612	Metal	Heptode	7T-1-0	Cathode	6.3	0.30	.001m	7.5	11.0	Characteristics Same as Type 6L7.										1612
1626	ST-12	Triode	6Q-0-0	Cathode	12.6	.25	4.4*	3.2*	3.4	250	70	95	Class C, Oscillator or Amplifier.						1626	
1629	GT	Electron Ray	7AL-0-0	Cathode	12.6	0.15				Characteristics Same as Type 6E5.										1629
2050	ST-12	Gas Tetode	6BS-0-0	Cathode	6.3	0.60	0.26*	4.2*	3.6*	400	5.0	0	100	For Relay Operation Limit Time to 30 Secs. 1 Amp. Peak Current, 8 Volts Tube Drop.						2050
2051	ST-12	Gas Tetode	6BS-0-0	Cathode	6.3	0.6	0.26*	4.2*	3.6*	220	4.0	0	75	For Relay Operation Limit Time to 30 Secs. 375 Ma. Peak Current, 8 Volts Tube Drop.						2051
5517/CK1013	Miniature	Gas Diode	5-BU	Cold Cathode						2800 Max. Peak Inverse V., 50 Ma. Max. Peak Current, 6 Ma. Avg. Current D-C. Avg. Tube Drop = 100.										5517/CK1013
5590	Miniature	Pentode	7BD-0-0	Cathode	6.3	0.15	0.01	3.40	2.90	90	Self	90	3.9	1.4	300,000	2,000	600	(Rk = 820 Ohms)	5590	
5591	Miniature	Pentode	7BD-0-0	Cathode	6.3	0.15	0.01	3.90	2.85	120	Self	120	7.5	2.5	340,000	5,000	1,700	(Rk = 200 Ohms)	5591	
										150	Self	140	7.0	2.2	480,000	4,300	1,800	(Rk = 330 Ohms)		
										180	Self	120	7.7	2.4	690,000	5,100	3,500	(Rk = 200 Ohms)		
5608-A	ST-14	Duodiode	7B-0-0	Cathode	2.5	2.0				250	5	5.0		14,000	2,200	31.5			5608-A	
										300	6	6.0		13,000	2,450	32				
5633 (3)	T-3	Pentode	5633	Cathode	6.3	0.15	0.01m	4.0	2.8	100	Self	100	7.0	2.8	200,000	3,400		(Rk = 150 Ohms)	5633 (3)	
5634 (3)	T-3	Pentode	5633	Cathode	6.3	0.15	0.01m	4.4	2.8	100	Self	100	6.5	2.5	240,000*	3,500		(Rk = 150 Ohms)	5634 (3)	
5635 (3)	T-3	Duodiode	8DB-0-0	Cathode	6.3	0.45	1.2	2.6	1.6	100	Self		4.8	10,000	3,800	38		(Rk = 100 Ohms)	5635 (3)	
5636 (3)	T-3	Pentode	8DC-0-0	Cathode	6.3	0.15	.015m	4.0	3.4	100	150*	3.5	5.7	320,000	1,280*			(Rk = 820 Ohms)	5636 (3)	
5637 (3)	T-3	Triode	8DK-0-0	Cathode	6.3	0.15	1.3	2.8	3.2	100	Self		1.4	26,000	2,700	70		(Rk = 270 Ohms)	5637 (3)	
5638 (3)	T-3	Pentode	5638	Cathode	6.3	0.15	0.19	4.0	6.5	100	Self		4.8	150,000	3,300			(Rk = 270 Ohms)	5638 (3)	
5639 (3)	T-3	Pentode	8DL-0-0	Cathode	6.3	0.45	0.10m	9.5	7.5	150	Self	100	21	4	50,000	9,000		(Rk = 100 Ohms)	5639 (3)	
5640 (3)	T-3	Pentode	8DL-0-0	Cathode	6.3	0.45	0.09	9.0	6.5	100	Self	100	31.0	2.2	15,000	5,000		(Rk = 270 Ohms)	5640 (3)	
5641 (3)	T-3	Diode	6CJ-0-0	Cathode	6.3	0.45				117 A-C Volts Per Plate, RMS, 45 Ma. D-C Output. Condenser Input to Filter.										5641 (3)

# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction		Emitter		Note (1) (*) Capacitances in $\mu\mu\text{f.}$			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type	
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.													Cin.
5642	T-3	Diode	5642	Filament	1.25	0.20													5642	
5643 (3)	T-3	Gas Tetrode	8DD-0-0	Cathode	6.3	0.15	0.1	1.7	1.6	0.6*	H-W Rect. Relay Tube	150	5	A-C	0	20	(Grid Bias Voltage 180°. Out of Phase with Anode Voltage)		5643 (3)	
5644 (3)	T-3	Gas Diode	4CN-0-0	Cold K							Voltage Regulator with Starting Voltage at 130, Operating Voltage 95, Operating Current 5 to 25 Ma.									5644 (3)
5645 (3)	T-2	Triode	5646	Cathode	6.3	0.15	1.2	2.4	3.4	3.4	Amplifier	100	Self		7,400	2,700	20	(Rk = 560 Ohms)	5645 (3)	
5646 (3)	T-2	Triode	5646	Cathode	6.3	0.15	1.2	2.4	3.4	3.4	Amplifier	100	Self		29,000	2,400	70	(Rk = 820 Ohms)	5646 (3)	
5647 (3)	T-1	Diode	5647	Cathode	6.3	0.15					Detector 117 Volts RMS Plate, 9 Ma. D-C Output.									5647 (3)
5654 (3)	Miniature	Pentode	78D-0-2&7	Cathode	6.3	0.175	0.09m	4.0	2.9	2.9	R-F Amp.	120	Self	120	7.5	2.5	340,000	5,000	(Rk = 200 Ohms)	5654 (3)
5670 (3)	T-6 1/2	Duotriode	8CJ-0-5	Cathode	6.3	0.35	1.1	2.2	1.0	1.0	H-F Amp.	150	240				6,370	5,500	35	5670 (3)
5679	Lock-In	Duotriode	7CX-L-5	Cathode	6.3	0.15					Characteristics Same as Type 7A6. For VTVM Use.									5679
5686 (3)	T-6 1/2	Pentode	9G-0-0	Cathode	6.3	0.35	0.08m	6.5	8.5	8.5	Amplifier	250	12.5	250	27	5.0	3,100	9,000	2,700	5686 (3)
5687	T-6 1/2	Duotriode	9H-0-0	Cathode	6.3	0.90	3.8*	4.0*	0.45*	0.45*	Amplifier#	250	12.5	180	12		4,000	5,200	16	5687
					12.6	0.45						180	7.0		22		2,750	8,100	17	
5691 (3)	GT	Duotriode	88D-0-0	Cathode	6.3	0.6	3.6*	2.4*	2.3*	2.3*	Amplifier	250	2			2.3	44,000	1,600	70	5691 (3)
							3.6*	2.7*	2.6*											
5692 (3)	GT	Duotriode	88D-0-0	Cathode	6.3	0.6	3.5*	2.3*	2.5*	2.5*	Amplifier	250	9			6.5	9,100	2,200	20	5692 (3)
							3.3*	2.6*	2.7*											
5693 (3)	Metal	Pentode	8N-1-0	Cathode	6.3	0.3	0.005m	5.8	6.8	6.8	R-F Amp.	250	3	100	3.0	0.85		1,650		5693 (3)
5694 (3)	ST-14	Duotriode	8CS-0-0	Cathode	6.3	0.8					Amplifier	250	5	6	7		11,300	3,100	35	5694 (3)
												250	6				11,000	3,200	3	

(1) Values are given shielded unless marked with (\*).

(2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output.

(3) Has special mechanical and/or life characteristics.

With Average Power Input of 350 Mw. Grid to Grid.

For Two tubes with 40 volts RMS applied to each grid.

\* Applied through 250,000 ohms.

# Per Tube or Section.

Applied through 20,000 ohms.

Conversion Transconductance.

Triode Operation.

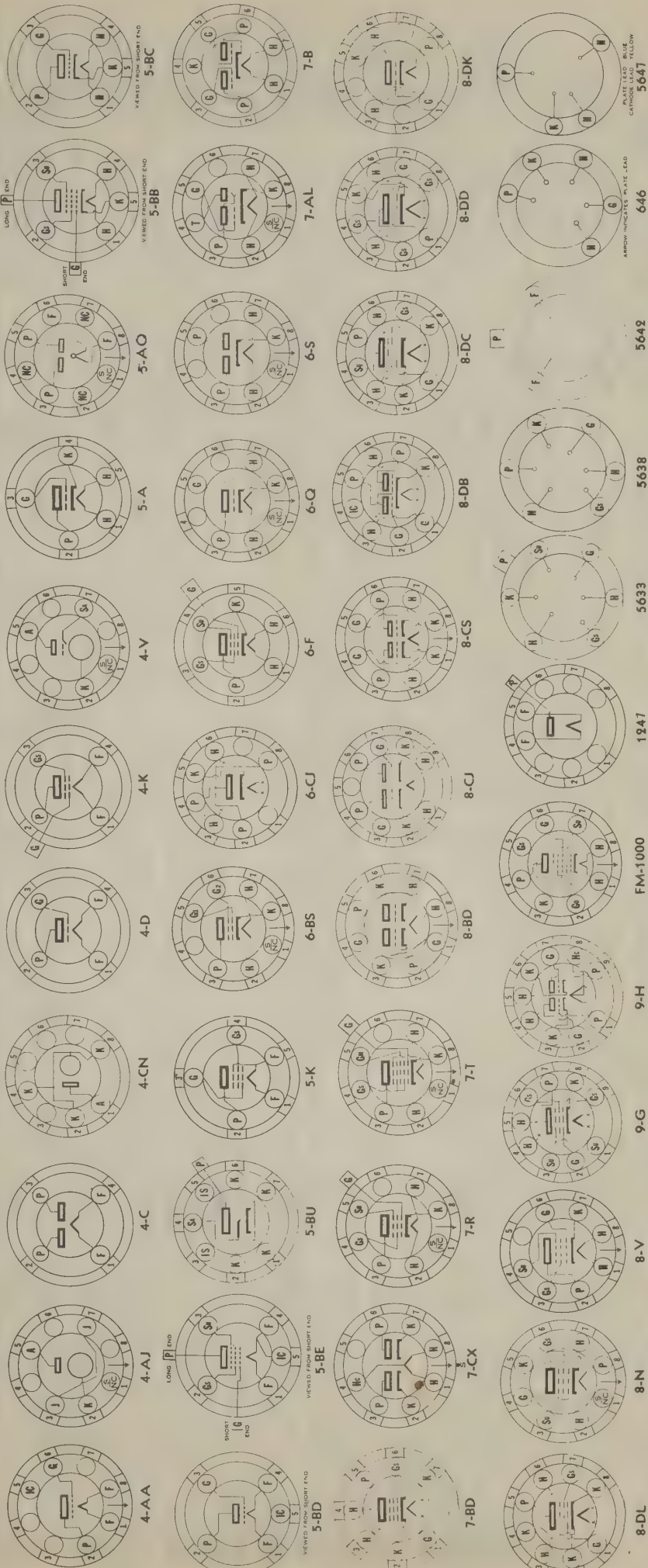
Pentode Operation.

Plate to Plate.

Approximate.

m maximum

■ Cathode Resistor



SYMBOLS FOR BASE DIAGRAMS: A—Anode; A1—Anode 1; A2—Anode 2; D1—Deflector 1; Dp—Diode Plate; F—Filament; Fc—Filament Center; G—Control Grid; Ga—Anode Grid; Gm—Modulator Grid; Go—Oscillator Grid; Gq—Quadrature Grid; Gs—Screen Grid; H—Heater; Hc—Heater Center; Hf—Heater Tap; IC—Internal Connection; J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode; Su—Suppressor Grid; T—Target; XS—External Shield; □—Top Cap; →→→ Locating Pin.

# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction		Emitter		Note ( ) (*) Capacitances in $\mu\mu\text{f}$ .					Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Output Milli-watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout												
5702	T-3	Pentode	5702	Cathode	6.3	0.2	0.03m	4.4	3.5	R-F Amp.	120	Self	120	7.5	2.5	340,000	5,000	...	(Rk = 200 Ohms)	5702	
5703	T-3	Triode	5703	Cathode	6.3	0.2	1.15	2.7	2.1	H-F Osc.	120	Self	9.0	9.0	...	5,000	25	(Rk = 220 Ohms)	5703		
5704	T-2	Diode	5704	Cathode	6.3	0.15	...	...	...	VHF Det.	150	Self	150	9 Ma. D-C Output Current.	...	...	...	...	5704		
5718 (3)	T-3	Triode	8DK-0-0	Cathode	6.3	0.15	1.3	2.4	2.4	Amplifier	100	Self	8.5	...	...	4,650	5,800	27	(Rk = 150 Ohms)	5718 (3)	
5719 (3)	T-3	Triode	8DK-0-0	Cathode	6.3	0.15	0.8	1.9	2.2	Amplifier	150	Self	13.0	...	...	30,500	2,300	70	(Rk = 680 Ohms)	5719 (3)	
5722	Miniature	Diode	5CB-0-0	Filament	4.9	1.6	...	...	...	Noise Diode	200	For Noise Generator Service	1.85	...	...	...	...	...	...	5722	
5725 (3)	Miniature	Pentode	7BD-0-0	Cathode	6.3	0.175	0.01	3.9	3.0	Amplifier	120	2	120	5.2	3.5	3,200	...	...	...	5725 (3)	
5726 (3)	Miniature	Duodiode	6BT-0-6	Cathode	6.3	0.3	...	...	...	Rectifier	117	Volts RMS Plate, 9 Ma. D-C Output Current Per Plate.	...	...	...	...	...	...	...	5726 (3)	
5731	Acom	Triode	5BC-0-0	Cathode	6.3	0.15	1.3*	1.0*	0.4*	A-F Amp.	90	2.5	...	9.5	...	14,700	1,700	95	...	5731	
											135	2.75	...	2.5	...	12,200	1,900	25	...		
											180	35	...	4.5	...	12,500	2,000	25	90,000		
											180	35	...	7.0	(Class C Operation)	...	...	...	500		
5744	T-3	Triode	5744	Cathode	6.3	0.2	0.8	2.7	2.4	Osc. Amp.	250	Self	4	...	...	4,000	70	...	(Rk = 500 Ohms)	5744	
5751 (3)	T-6 1/2	Duodiode	9A-0-0	Cathode	6.3	.35	1.4*	1.4*	...	A-F Amp.	...	...	...	...	...	...	...	...	Cout Sec. 1 = .46 $\mu\mu\text{f}$ .	5751 (3)	
											12.6	.175	...	...	...	...	...	...	...		
5782	T-3	Gas Diode	5783	Cold K	6.3	0.2	...	...	...	Voltage Regulator with Starting Voltage at 115 Volts, Operating Voltage 85, Operating Current 1.5 to 3.5 Ma.	120	2	120	5.2	3.5	3,200	...	...	...	5782	
5784	T-3	Pentode	5784	Cathode	6.3	0.2	0.03m	3.9	3.0	Amplifier	120	2	120	5.2	3.5	3,200	...	...	...	5784	
5785	T8x3	Diode	5785	Filament	1.25	0.015	...	...	...	H-W Rect.	1235	Volts, RMS Plate, 100 us D-C Output Current.	...	...	...	...	...	...	...	5785	
5787	T-3	Gas Diode	5783	Cold K	6.3	0.3	...	...	...	Voltage Regulator with Starting Voltage at 135 Volts, Operating Voltage 100, Operating Current 5 to 25 Ma.	135	22	135	61	2.5	15,000 $\pm$	5,000	...	...	5787	
5824 (3)	ST-14	Pentode	75-0-0	Cathode	25.0	0.3	...	...	...	Power Amp.	300	A-C Volts Per Plate RMS, 65 Ma. Output Current, Condenser Input to Filter.	...	...	...	...	...	...	1,700	4,300	5824 (3)
5838 (3)	GT	Duodiode	65-0-0	Cathode	12.0	0.60	...	...	...	F-W Rect.	400	A-C Volts Per Plate RMS, 60 Ma. Output Current, Choke Input to Filter.	...	...	...	...	...	...	...	5838 (3)	
5839 (3)	GT	Duodiode	65-0-0	Cathode	26.5	0.285	...	...	...	F-W Rect.	Characteristics Same as Type 5838.	...	...	...	...	...	...	...	...	5839 (3)	
5840 (3)	T-3	Pentode	8DL-0-0	Cathode	6.3	0.15	.015m	4.2	3.4	R-F Amp.	100	Self	100	7.5	2.4	280,000	5,000	(Rk = 150 Ohms)	5840 (3)		
5845	Miniature	Duodiode	5CA-0-0	Filament	5.0m	0.435	...	...	...	Control Diode	300m	...	2.0m	...	...	...	...	...	...	5845	
5847	T-6 1/2	Pentode	9X-0-3 & 4	Cathode	6.3	0.3	.04m	7.1	2.9	R-F Amp.	150	Self	150	13	4.5	12,500	...	(Rk = 110 Ohms)	5847		
5851 (3)	T-3	Pentode	6CL-0-0	Filament	1.25	0.11	0.055	2.5	3.0	R-F Amp.	125	7.5	125	5.5	0.9	175,000	1,600	...	...	5851 (3)	
											180	7.0	135	...	...	...	...	...	...		
5852 (3)	GT	Duodiode	65-0-0	Cathode	6.3	1.20	...	...	...	F-W Rect.	Characteristics Same as Type 5838.	...	...	...	...	...	...	...	...	5852 (3)	
5871 (3)	GT	Pentode	75-0-0	Cathode	6.3	0.45	0.7*	9.5*	7.5*	Power Amp.	Characteristics Same as Type 6V6GT.	...	...	...	...	...	...	...	...	5871 (3)	
5879	T-6 1/2	Pentode	9AD-0-0	Cathode	6.3	0.15	0.11m*	2.7	2.4	R-F Amp.	250	3	100	1.8	0.4	2,000,000 $\pm$	1,000	...	...	5879	
5881	T-11	Pentode	75-0-0	Cathode	6.3	0.90	...	...	...	Power Amp.	Characteristics Same as Type 6L6G.	...	...	...	...	...	...	...	...	5881	
5889	T-3	Pentode	5889	Filament	1.25	7.5Ma	...	...	...	Amplifier	12	2.0	...	.005	.005	1.8 Meg.	(For Low Grid Current Applications)	...	...	5889	
5896 (3)	T-3	Duodiode	8DJ-0-4	Cathode	6.3	0.3	...	...	...	F-W Rect.	150	Volts RMS Per Plate, 18 Ma. D-C Output Current.	...	...	...	...	...	...	...	5896 (3)	
5897 (3)	T-3	Triode	8DK-0-0	Cathode	6.3	0.15	1.3	2.4	2.4	R-F Osc.	100	Self	...	8.5	...	4,650	5,800	27	(Rk = 150 Ohms)	5897 (3)	
											150	Self	...	13	...	4,150	6,500	27	(Rk = 180 Ohms)		
5898 (3)	T-3	Triode	8DK-0-0	Cathode	6.3	0.15	0.8	1.9	2.2	Amplifier	100	Self	...	0.73	...	41,000	1,700	70	(Rk = 1500 Ohms)	5898 (3)	
											150	Self	...	1.85	...	30,500	2,300	70	(Rk = 680 Ohms)		
5899 (3)	T-3	Pentode	8DL-0-0	Cathode	6.3	0.15	.015m	4.4	3.4	R-F Amp.	100	Self	100	7.5	2.2	260,000	4,500	(Rk = 120 Ohms)	5899 (3)		
5900 (3)	T-3	Pentode	8DL-0-0	Cathode	6.3	0.15	.015m	4.4	3.4	R-F Amp.	Characteristics Same as Type 5899.	...	...	...	...	...	...	...	...	5900 (3)	
5901 (3)	T-3	Pentode	8DL-0-0	Cathode	6.3	0.15	.015m	4.2	3.4	R-F Amp.	100	Self	100	7.5	2.4	280,000	5,000	(Rk = 150 Ohms)	5901 (3)		
5902 (3)	T-3	Pentode	8DL-0-0	Cathode	6.3	0.45	0.20m	6.5	7.5	Power Amp.	110	Self	110	30	2.2	15,000	4,200	(Rk = 270 Ohms)	5902 (3)		
5910	Miniature	Pentode	6AR-0-5	Filament	1.4	0.05	.008m	3.6	7.5	R-F Amp.	90	0	90	1.6	0.45	1,500,000 $\pm$	900	...	...	5910	
5915	Miniature	Heptode	7CH-0-0	Cathode	6.3	0.30	...	...	...	Converter	150	0	75	5.8	9.0	20,000	...	(Rg0 = 47,000 Ohms)	5915		
5930 (3)	T-12	Triode	4D-0-0	Filament	2.5	2.5	...	...	...	Power Amp.	Characteristics Same as Type 2A3.	...	...	...	...	...	...	...	...	5930 (3)	
5931 (3)	T-12	Duodiode	5T-0-0	Filament	5.0	3.0	...	...	...	F-W Rect.	Characteristics Same as Type 5U4G.	...	...	...	...	...	...	...	...	5931 (3)	
5932 (3)	T-12	Beam Amp.	75-0-0	Cathode	6.3	0.90	...	...	...	Power Amp.	Characteristics Same as Type 6L6G.	...	...	...	...	...	...	...	...	5932 (3)	
5963 (3)	T-6 1/2	Duodiode	9A-0-0	Cathode	6.3	0.30	1.5*	1.9*	0.5*	Computers Freq. Divider	67.5	0	...	7.0	...	7,850	2,800	22	(Rb = 20,000 Ohms)	5963 (3)	
											150	0	...	5.1	...	...	...	...	...		
5964 (3)	Miniature	Duodiode	7BF-0-0	Cathode	6.3	0.45	1.3*	2.1*	0.4*	Computers Freq. Divider	100	Self	9.5	...	...	6,500	6,000	39	(Rk = 50 Ohms)	5964 (3)	
											150	0	...	5.0	...	(Rb = 20,000 Ohms)	...	...	...		
5977 (3)	T-3	Triode	8DK-0-0	Cathode	6.3	0.15	1.3	2.0	2.2	Amplifier	100	Self	10.0	...	...	3,650	4,500	16	(Rk = 270 Ohms)	5977 (3)	
5987 (3)	T-3	Triode	8DM-0-0	Cathode	6.3	0.45	3.2	3.2	5.0	Amplifier	100	18	...	9.0	...	1,850	4.1	...	...	5987 (3)	
6004	GT	Duodiode	5T-0-0	Filament	5.0	2.0	...	...	...	F-W Rect.	375	Volts RMS Per Plate, 120 Ma. D-C Output. Condenser Input to Filter.	...	...	...	...	...	...	...	6004	
6005 (3)	Miniature	Pentode	7BZ-0-0	Cathode	6.3	0.45	...	...	...	Power Amp.	180	8.5	180	29	3.0	58,000	3,700	...	5,500	6005 (3)	
											250	12.5	250	45	4.5	52,000	4,100	...	5,000		
											250	15	250	70	5.0	Current and Output for Two Tubes	...	10,000	10,000		
6021 (3)	T-3	Duodiode	8DG-0-0	Cathode	6.3	0.3	1.4	2.1	...	P.P. Class AB1 U-H-F Amp. #	100	150 $\mu\text{f}$	6.5	...	...	6,480 $\pm$	5,400	35	Cout Sec. 1 = 1.3 $\mu\mu\text{f}$ .	6021 (3)	
											...	...	...	...	...	...	...	...	...		
X6030	Lock-in	Diode	X6030	Filament	3.0m	0.6	...	...	...	Noise Diode	90	...	4.0m	...	...	...	...	...	...	X6030	
											1400	...	3.0m	...	...	...	...	...	...		
6045	T-5 1/2	Duodiode	7BF-0-0	Cathode	6.3	0.35	1.3*	2.0*	...	H-F Amp. #	100	...	9.0	...	...	5,940 $\pm$	6,400	38	Rk = 50 Ohms	6045	
											...	...	...	...	...	...	...	Cathodes Tied Together	...		
6052 (3)	T-3	Duodiode	8DJ-0-4	Cathode	6.3	0.30	...	...	...	Detector	150	Volts RMS Per Plate, 18 Ma. D-C Output. Condenser Input to Filter.	...	...	...	...	...	...	...	6052 (3)	
6053 (3)	T-3	Duodiode	8DJ-0-4	Cathode	26.5	0.075	...	...	...	Detector	150	Volts RMS Per Plate, 18 Ma. D-C Output. Condenser Input to Filter.	...	...	...	...	...	...	...	6053 (3)	
6055 (3)	T-3	Triode	8DK-0-0	Cathode	26.5	0.045	1.80*	2.20*	0.8*	Amplifier	26.5	Self	...	3.0	...	5,000	...	(Rg1 = 2.2 Megs.)	...	6055 (3)	
6056 (3)	T-3	Pentode	8DL-0-0	Cathode	26.5	0.045	.015m	4.0	3.4	Amplifier	26.5	Self	26.5	2.7	1.1	100,000	3,000	(Rg1 = 2.2 Megs.)	...	6056 (3)	

# SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction		Emitter		Note (*) (?) Capacitances in $\mu\mu\text{f}$ .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undis-torted Power Output Milli-watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.												
6110 (3)	T-3	Duodiode	8DJ	Cathode	6.3	0.15	1.5	1.9	0.28 0.32									6110 (3)	
6111 (3)	T-3	Duodiode	8DG	Cathode	6.3	0.3	1.5	1.9	0.98	100	220 <sup>m</sup>	8.5		4,900	4,750	20		6111 (3)	
6112 (3)	T-3	Duodiode	8DG	Cathode	6.3	0.3	1.0	1.7	0.93 0.98	100 150	1500 <sup>m</sup> 820 <sup>m</sup>	0.8 1.75		38,900 28,000	1,800 2,500	70 70		6112 (3)	
6145	T-9	Pentode	8V-0-5	Cathode	6.3	0.6	.06m	14.0	7.5	100	0	34	8.0	0.1 Meg.	9,700			6145	
6205 (3)	T-3	Pentode	8DC-0-2&8	Cathode	6.3	0.15	.015	4.2	3.4	100	150 <sup>m</sup>	100	7.5	0.26 Meg.	5,000			6205 (3)	
6206	T-3	Pentode	8DC	Cathode	6.3	0.15	.015	4.2	3.4	100	120 <sup>m</sup>	100	7.5	0.26 Meg.	4,500			6206 (3)	
6287 (3)	T-6 1/2	Beam Amp.	9CT-0-0	Cathode	6.3	0.6	1.1m	8.0	9.0	950	12.5	250	5.0	55,000	4,100			6287 (3)	
6308 (3)	T-3	Gas Diode	8EX-0-0	Cold K														6308 (3)	
6350	T-6 1/2	Duodiode	9CZ-0-0	Cathode	6.3	0.6 12.6	3.2 <sup>*</sup>	3.6 <sup>*</sup>	0.6 <sup>*</sup>	150	5.0	11.0		3,900	4,600	18		6350 (3)	
6352	T-3	Duodiode	8EY-0-0	Filament	3.0	0.36												6352	
9001	Miniature	Pentode	7BD-0-7	Cathode	6.3	0.15	0.01	3.6	3.0	250	3.0	100	0.7	1 Meg. Min.	1,400			9001	
9002	Miniature	Triode	7BS-0-0	Cathode	6.3	0.15	1.4	1.2	1.1	250	7.0	6.3		11,400	2,900	25		9002	
9003	Miniature	Pentode	7BD-0-7	Cathode	6.3	0.15	0.01m	3.6	3.0	250	3.0	100	6.7	700,000	1,800			9003	
9004	Acorn	Diode	4BJ-0-0	Cathode	6.3	0.15				117 Volts RMS Plate, 5 Ma. D-C Output.								9004	
9005	Acorn	Diode	5BG-0-0	Cathode	6.3	0.15				117 Volts RMS Plate, 1.0 Ma. D-C Output.								9005	
9006	Miniature	Diode	6BH-0-0	Cathode	6.3	0.15				270 Volts RMS Plate, 5 Ma. D-C Output.								9006	
XXD	Now Listed as 14AF7/XXD																		
XXFM	Now Known as Type 7X7																		
XXL	Lock-in	Triode	5AC-L-0	Cathode	6.3	0.30				100 250	0.0 8.0			7,000 8,700	3,600 2,300	25 20		XXFM XXL	
(1) Values are given shielded unless marked with (*).																			
(2) Converter tube capacitances given are signal grid to plate;																			
RF Input, Mixer Output.																			
* Applied through 250,000 ohms.																			
# Per Tube or Section.																			
△ Plate and Target Supply Voltage.																			
◇ Triode Operation.																			
□ Pentode Operation.																			
▲ Conversion Transconductance.																			
■ Cathode Resistor																			
m maximum																			

(1) Values are given shielded unless marked with (\*).  
 (2) Converter tube capacitances given are signal grid to plate;  
 RF Input, Mixer Output.  
 (3) Has special mechanical and/or life characteristics.  
 (4) With Average Power Input of 350 Mw. Grid to Grid.  
 (5) For two tubes with 40 volts RMS applied to each grid.  
 \* Applied through 250,000 ohms.  
 † Pentode Operation.  
 ‡ Plate to Plate.  
 ‡ Triode Operation.

4-BJ

4-D

5-AC

5-BC

5-BG

5-CA

5-CB

5-T

6-AR

6-BH

6-BT

6-CL

6-S

7-BD

7-BF

7-BS

7-BZ

7-CH

7-S

8-DC

8-DJ

8-CL

8-DL

8-DM

8-EY

8-EX

8-V

9-A

9-AD

9-CZ

9-CT

9-X

SYMBOLS FOR BASE DIAGRAMS:  
 A—Anode; A1—Anode 1; A2—Anode 2; D1—Deflector 1; D2—Deflector 2; G—Control Grid; Gm—Modulator Grid; Go—Oscillator Grid;  
 Gq—Quadrature Grid; Gs—Screen Grid; H—Heater; Hc—Heater Center; Ht—Heater Tap; IC—Internal Connection; J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode;  
 Su—Suppressor Grid; T—Target; XS—External Shield; □—Top Cap; —>—Locating Pin.

## TUBE TYPE BASE ARRANGEMENTS

[illegible]

\*This indicates an internal shield connected to Pin No. 1

# SYLVANIA PANEL LAMP CHARACTERISTICS

Type No.	Circuit Volts	Design		Bead Color	Bulb Style	Miniature Base	Usual Service	Type No.
		Volts	Amp.					
C7	120	10 Watt		.....	C7	Candelabra	Pilot Lamps	C7
S6	120	6 Watt		.....	S6	Candelabra	Pilot Lamps	S6
S40	6-8	6.3	0.15	Brown	T-3 1/4	Screw	Radio Dials	S40
S41	2.5	2.5	0.50	White	T-3 1/4	Screw	Radio Dials	S41
S42	3.2	3.2	0.50	Green	T-3 1/4	Screw	Radio Dials	S42
S43	2.5	2.5	0.50	White	T-3 1/4	Bayonet	Radio Dials and Tuning Meters	S43
S44	6-8	6.3	0.25	Blue	T-3 1/4	Bayonet	Radio Dials and Tuning Meters	S44
S45	3.2	3.2	0.50	White	T-3 1/4	Bayonet	Radio Dials	S45
S46	6-8	6.3	0.25	Blue	T-3 1/4	Screw	Radio Dials and Tuning Meters	S46
S47*	6-8	6.3	0.15	Brown	T-3 1/4	Bayonet	Radio Dials	S47*

Type No.	Circuit Volts	Design		Bead Color	Bulb Style	Miniature Base	Usual Service	Type No.
		Volts	Amp.					
S48	2.0	2.0	0.06	Pink	T-3 1/4	Screw	Battery Set Dials	S48
S49*	2.0	2.0	0.06	Pink	T-3 1/4	Bayonet	Battery Set Dials	S49*
S50	6-8	7.5	0.20	White	G-3 1/2	Screw	Auto Sets, Flash Lights	S50
S51	6-8	7.5	0.20	White	G-3 1/2	Bayonet	Auto Sets, Auto Panels	S51
S55	6-8	6.5	0.40	White	G-4 1/2	Bayonet	Auto Sets, Parking Lights	S55
S292	2.9	2.9	0.17	White	T-3 1/4	Screw	Radio Dials	S292
S292A S291	2.9	2.9	0.17	White	T-3 1/4	Bayonet	Radio Dials Coin Machines	S292A
S1455	18.0	18.0	0.25	Brown	G-5	Screw	Coin Machines	S1455
S1455A S1456	18.0	18.0	0.25	Brown	G-5	Bayonet	Coin Machines	S1455A

\*Sylvania Types S47 and S49 are interchangeable with Types 40A and 49A, respectively, in other brands.

# SYLVANIA CRYSTAL DIODES

## CHARACTERISTICS AT 25° C

## MAXIMUM RATINGS AT 25° C

TYPE	DESCRIPTION	AMBIENT TEMPERATURE RANGE (°C.)	CONTINUOUS REVERSE WORKING VOLTAGE (VOLTS)	RECURRENT PEAK ANODE CURRENT (MA.)	AVERAGE ANODE CURRENT (MA.)	SURGE CURRENT (MA. 1 SEC.)	PEAK REVERSE VOLTAGE FOR ZERO DYNAMIC RESISTANCE (VOLTS MIN.)	FORWARD CURRENT AT +1 VOLT (MA. MIN.)	REVERSE CURRENT (MA. MAX.)	FORWARD RESISTANCE AT +1 VOLT (OHMS MAX.)	REVERSE RESISTANCE (OHMS MIN.)
IN34	General Purpose Diode	-50 to +75	60	150	50	500	75	5	50 @ -10V, 800 @ -50V	200	200K @ -10V, 625K @ -50V
IN34A	General Purpose Diode	-55 to +75	60	150	50	500	75	5	30 @ -10V, 500 @ 50V	200	330K @ -10V, 100K @ -50V
IN35	Matched Duo-Diode (Note 1)	-50 to +75	50	60	22.5	100	75	7.5	10 @ -10V	133	1.0 meg @ -10V
IN38	100 Volt Diode	-50 to +75	100	150	50	500	120	3	6 @ -3V, 625 @ -100V	333	500K @ -3V, 160K @ -100V
IN38A	100 Volt Diode	-55 to +75	100	150	50	500	120	4	6 @ -3V, 500 @ -100V	250	500K @ -3V, 200K @ -100V
IN39	200 Volt Diode	-50 to +75	200	150	50	500	225	3.0	200 @ -100V, 800 @ -200V	250	500K @ -100V, 250K @ -200V
IN40	General Purpose Varistor (Note 2)	-50 to +75	25	60	22.5	100	75	12.75 @ 1.5 V	35 @ -10V	118 @ 1.5V	250K @ -10V
IN41	General Purpose Varistor (Note 2)	-50 to +75	25	40	22.5	50	75	12.75 @ 1.5 V	40 @ -10V	118 @ 1.5V	250K @ -10V
IN42	100 Volt Varistor (Note 2)	-50 to +75	100	50	22.5	75	120	12.75 @ 1.5 V	800 @ -100V	118 @ 1.5V	125K @ -10V
IN54	High Back Resistance Diode	-50 to +75	35	150	50	500	75	5	10 @ -10V	200	1.0 meg @ -10V
IN54A	High Back Resistance Diode	-50 to +75	35	150	50	500	75	5	7 @ -10V, 100 @ -50V	200	1.4 meg @ -10V, 500K @ -50V
IN55	150 Volt Diode	-50 to +75	150	150	50	500	170	3	300 @ -100V, 800 @ -150V	333	330K @ -100V, 187K @ -150K
IN55A	150 Volt Diode	-50 to +75	150	150	50	500	170	4	500 @ -150V	250	300K @ -150V
IN56	High Conduction Diode	-50 to +75	40	200	60	1000	50	15	300 @ -30V	67	100K @ -30V
IN56A	High Conduction Diode	-50 to +75	40	200	60	1000	50	15	300 @ -30V	67	100K @ -30V
IN58	100 Volt Diode	-50 to +75	100	150	50	500	120	4	700 @ -100V	250	140K @ -100V
IN58A	100 Volt Diode	-50 to +75	100	150	50	500	120	4	600 @ -100V	250	167K @ -100V
IN59	250 Volt Diode	-50 to +75	260	150	50	500	275	3.0	800 @ -250V	333	300K @ -250V
IN60	Video Detector Diode	-50 to +75	25	150	50	500	30	Note 3	Note 4	...	150K (Note 4)
IN67	High Back Resistance Diode	-50 to +75	80	100	35	500	100	4.0	5 @ -5V, 50 @ -50V	250	1 meg @ -5V, 1 meg @ -50V
IN69	General Purpose Diode	-55 to +75	60	125	40	400	75	5	50 @ -10V, 850 @ -50V	20	200K @ -10V, 588K @ -50V
IN71	Low Impedance Varistor (Note 5)	-50 to +75	40	200	60	1000	50	15	300 @ -30V	67	100K @ -30V
IN81	High Back Resistance Diode	-55 to +75	40	90	30	350	50	3	10 @ -10V	333	1.0 meg @ -10V
IN82	UHF Mixer Diode	-50 to +75	---	---	---	---	Note 6	---	---	---	---
IN82A	UHF Mixer Diode	-50 to +75	---	---	---	---	Note 6	---	---	---	---
IN105	Video Detector Diode	-50 to +75	25	150	50	500	75	Note 3	Note 4	---	150K (Note 4)
IN109	Harmonic Generator Diode	-50 to +75	15	150	50	500	75	Note 7	---	---	---
IN111	Computer Diode	-50 to +75	60	150	25	500	75	5	---	200	400K @ 55°C (Note 8)
IN112	Computer Diode	-50 to +75	60	150	25	500	75	5	---	200	200K @ 55°C (Note 8)
IN113	Computer Diode	-50 to +75	60	150	25	500	75	2.5	---	400	400K @ 55°C (Note 8)
IN114	Computer Diode	-50 to +75	60	150	25	500	75	2.5	---	400	200K @ 55°C (Note 8)
IN115	Computer Diode	-50 to +75	60	150	25	500	75	2.5	---	400	100K @ 55°C (Note 8)
IN119	Computer Diode	-50 to +75	60	150	25	500	75	5	---	200	400K @ 55°C (Notes 8 & 9)
IN120	Computer Diode	-50 to +75	60	150	25	500	75	5	---	200	200K @ 55°C (Notes 8 & 9)
IN132	Video Detector Diode	-50 to +75	25	150	50	500	30	Note 10	Note 4	---	150K (Note 4)
IN172	UHF Mixer Diode	-50 to +75	---	---	---	---	Note 6	---	---	---	---

Note 1—Units are matched in the forward direction at 1 volt so that the current flowing through the lower resistance unit is within 10% of that through the higher resistance unit. Ratings are shown for each diode.

Note 2—Consists of four specially selected and matched diodes whose resistances are balanced within  $\pm 2.50\%$  in the forward direction at 1.5 volts. For additional balance, the forward resistance of each varistor pair is matched to within three ohms. Ratings shown are for each diode.

Note 3—Units are tested in a circuit employing an input of 1.6 volts rms at 40 MC, 75% modulated at 400 cycles. Demodulated output across a 4700 ohm resistor shunted by a 5  $\mu$ f capacitor is a minimum of 1.55 volts peak to peak.

Note 4—Minimum specified reverse resistance applies to all points between 0 and -10 volts with 60 cps sweep.

Note 5—Consists of four specially selected diodes whose forward currents are

matched within a range of 1 ma. with 1 volt applied. Ratings shown are for each diode.

Note 6—The 1N82, 1N82A, and 1N172 are low noise and low conversion loss UHF television mixer crystals. The noise factor of the 1N82 is 16 db max., that of the 1N82A is 14 db max. The noise factor is measured at 700 mc with a local oscillator drive (bias current) of 0.5 ma.

Note 7—Units are tested in a circuit employing a fundamental frequency of 196 MC. The rectified 3rd harmonic output is 0.5 ma minimum.

Note 8—Minimum specified reverse resistance applies at 55°C for all points between -10V and -50V with 60 cps sweep.

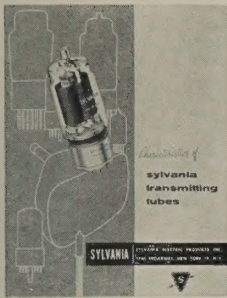
Note 9—Reverse recovery time for these units is specified and defined as the time required for the diode to recover to a given reverse current when the operating voltage necessary to give 30 ma forward conduction is rapidly switched to -35 volts.

Recovery Time $\mu$ sec.	Reverse Resistance ohms	Reverse Current $\mu$ A	Type
0.5	50 K	700	1N119
3.5	400 K	82.5	
0.5	50 K	700	1N120
3.5	500 K	175	

Note 10—Units are tested in a circuit employing an input of 0.1 volts rms at 44 MC. Rectified output is a minimum of 140  $\mu$ A with a 3600 ohm load and 65  $\mu$ h shunted by 5  $\mu$ f capacitor.

Note 11—Normally supplied with  $\frac{1}{2}$ " minimum leads but will be supplied without leads for clip-in applications upon request. The polarity of all Sylvania crystals is indicated by a graphic symbol on the body. The cathode side is indicated by a color band and the label "CATH".

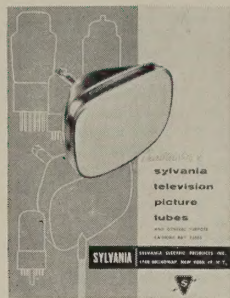
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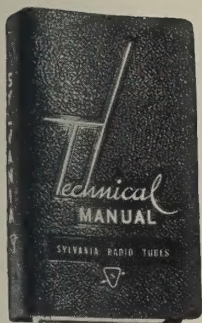


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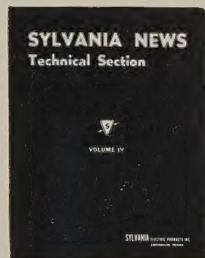
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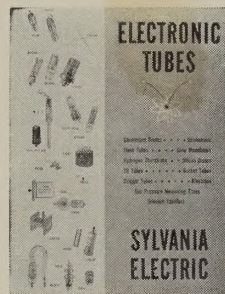
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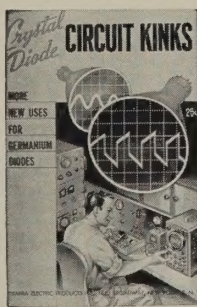
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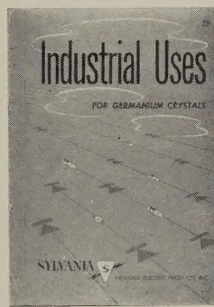
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